FIELD CONVOLVULUS.

FAMILIAR

WILD FLOWERS

FIGURED AND DESCRIBED BY

F. EDWARD HULME, F.L.S., F.S.A.

"When forth I go upon my way a thousand joys are mine,
The clusters of dark violets, the wreaths of the wild vine;
My jewels are the primrose pale, the bindweed, and the rose;
And show me any courtly gem more beautiful than those."

HOWITT.

First Series

WITH COLOURED PLATES

CASSELL AND COMPANY, LIMITED

LONDON, PARIS, NEW YORK, TORONTO & MELBOURNE

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BIBLIOTHÈQUE SAUVAGE

PREFACE.

But few words of introduction can possibly be needed, we are sure, in bringing before our readers the following series of illustrations. The plants we have represented will be to many as old familiar friends, linked in their minds with sunny memories; and nothing that we can say or leave unsaid will either enhance or detract from their enjoyment. To those, however, who have yet to find in a new study this wealth of interest, we would venture to commend our pleasant labours, in the earnest hope that through them they may be led to enter for themselves on this enjoyable pursuit, and find, like ourselves, in the study of Nature an ever-increasing delight. The dustiest roadside walk will then have its attractions, while the fairest scenes will receive an added charm.

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SUMMARY.

In the following pages it is our intention to give a brief epitome of each of the plants represented in this volume. We give these details of the various plants in the same order as the plants themselves have succeeded each other. The recognised botanical sequence would in some respects have been preferable, but the present arrangement will at least have the advantage of enabling any of our readers readily to turn to the body of the book and find any particular plant, and thus to obtain fuller details and its pictorial presentment.

In our Summary we have availed ourselves largely of the writings of such masters of botanical science as Hooker, Lindley, and Bentham. All that can be said has been so accurately laid down by such men, that to strive after originality would be but to leave the true path, and, while escaping the charge of building on the foundations of others, to incur the greater responsibility of misleading those whom we profess to guide.

The necessities of our limited space have made great condensation necessary; we have therefore only taken the more salient points.

FIELD CONVOLVULUS, or SMALL BINDWEED, *CONVOLVULUS ARVENSIS. Nat. Ord., Convolvulaceæ.*—Calyx of five sepals, small, broad, and unequal. Corolla campanulate, rose-coloured and white. Stamens five, long filaments, inserted at base of tube of corolla. Style filiform; stigmas two, linear. Capsule two-celled, each cell containing two seeds. Leaves alternate, stalked, ovate, sagittate, lobes often very acute, very variable in form. Peduncle axillary, one or two-flowered; bracts small and at some distance from flowers. Growth twining or prostrate.—Corn-fields, gardens, and hedgerows. June, July, August. Perennial. *p.* 1.

FIELD-ROSE, *ROSA ARVENSIS. Nat. Ord., Rosaceæ.*—Calyx leafy, five sepals, imbricated in buds. Corolla of five petals, scentless, white. Flowers ordinarily growing in a cluster at the ends of the branches. Stamens numerous. Styles united in a column. Fruit globular. Leaves shining; leaflets five to seven, serrated. Branches long, very trailing (hence plant sometimes called trailing dog-rose), slender, purplish; hooked prickles.—Woods, hedgerows, and thickets. Flowers throughout the summer. *p.* 5.

MEADOW CRANE'S-BILL, *GERANIUM PRATENSE. Nat. Ord., Geraniaceæ.*—Calyx of five sepals, imbricate in æstivation, persistent. Petals five, large, bluish-purple. The inflorescence paniculate. Stamens ten, five short and five long, some often antherless. Ovary five-lobed, terminating in a long beak and five stigmas. Leaves large, divided into five or seven leaflets, coarsely serrated; all leaves on petioles, those of the radical leaves very long. Stems forking, swollen at the nodes, about three feet high. Capsule smooth, composed of five carpels; pedicels bearing fruit deflexed. Rootstock perennial.—Moist meadows and woods. *p.* 9.

SILVERWEED, *POTENTILLA ANSERINA. Nat. Ord., Rosaceæ.*—Calyx of ten divisions, the alternate ones being outside the others, and often somewhat smaller. Corolla of five petals, bright yellow. Flowers solitary on slender axillary peduncles, springing from the rooting nodes. Stamens numerous. Carpels numerous. Leaves interruptedly pinnate; leaflets deeply serrate; alternate leaflets very small; both upper and under surfaces often thickly covered with grey and silky hairs. Stoloniferous.—Roadsides, damp pasturage. May, June, July. Perennial. *p.* 13.

APPLE, *PYRUS MALUS. Nat. Ord., Rosaceæ.*—Calyx-tube adhering to ovary and urceolate, the upper part five-cleft, woolly. Corolla of five petals, pink and white. Stamens numerous. Styles united at base. Flowers clustered together in an umbel. Fruit fleshy, globose, having five coriaceous two-seeded cells. Leaves stalked, ovate, finely serrate, slightly downy when young. A shrub or small tree.—Hedges and woods. Flowering in spring, and the fruit yellow, mature in autumn, but very austere and sharp. *p.* 17.

BORAGE, *BORAGO OFFICINALIS. Nat. Ord., Boraginaceæ.*—Calyx of five segments, very deeply cleft. Corolla rotate, monopetalous, five-cleft, tube very short, throat closed by short scales. Stamens five; filaments short; anthers purplish-black, growing together in a conical form in the centre of the flower. Style filiform. Fruit a nutlet. Inflorescence terminal and axillary cymose. Leaves alternate, exstipulate; stem-leaves obovate, having petioles; the upper leaves sessile, waved, narrower than the lower. The whole plant thickly clothed with grey hairs. Stem stout and succulent, freely branching. One to two feet high.—Biennial. June, July. Rubbish and waste ground near houses. *p.* 21

SCARLET POPPY, or **RED-WEED**, *PAPAVER RHŒAS. Nat. Ord., Papaveraceæ.*—Calyx of two sepals, falling off on expansion of flower. Petals four, two larger than the other two, bright scarlet, much crumpled in bud. Buds nodding. Stamens very numerous, hypogynous. Stigma sessile, radiate. Capsule globular, glabrous, dehiscent by small valves. Seeds small and very numerous. Leaves very various in size and form, the lower ones large, stalked, pinnately divided; the upper ones small and less deeply cut, exstipulate. An erect and slightly branching annual, bearing

its blossoms on long peduncles, the stems having stiff and bristle-like hairs. —Flowers throughout the summer. Railway embankments, corn-fields, and waste ground. *p.* 25.

CUCKOO-PINT, *ARUM MACULATUM. Nat. Ord., Araceæ.*—Flowers unisexual, numerous, perianth wanting, grouped upon a spadix, the fertile flowers at its base. Stamens indefinite. Spadix terminating in a naked cylindrical column; purplish. The whole surrounded by a spathe; erect, yellowish-green, often edged and blotched with purple. Fruits succulent, scarlet, massed together. Leaves, sheathing the stem by their petioles, radical, sagittate, nerves reticulate, shining, often blotched with purplish-black. Rhizoma large. Corms produced annually.—April, May. Woods and hedgerows. *p.* 29.

SWEET VIOLET, *VIOLA ODORATA. Nat. Ord., Violaceæ.*—Calyx persistent, five sepals produced at the base. Corolla irregular, five spreading petals, the lowest being elongated into a spur at the base. Flowers deep purple, sometimes reddish-purple or white, and very fragrant. Stamens five; anthers connate. Style one; stigma pointed. Capsules opening in three valves, often produced by minute, almost petal-less flowers that appear later on in the year. Leaves cordate, deeply lobed, stipulate, finely serrate. Peduncle bearing bracts. Rootstock short; lateral scions freely creeping.—Banks, hedges, copses. March, April, May. Perennial. *p.* 33.

PRIMROSE, *PRIMULA VULGARIS. Nat. Ord., Primulaceæ.*—Calyx tubular, five-toothed. Corolla regular, salver-shaped, five-lobed, each lobe orbicular and deeply notched, a straight tube. Stamens five, inserted in tube. Style filiform, with capitate stigma. Fruit a capsule. Leaves obovate, crenate, wrinkled, radical. Flower-stalks springing from one point, each bearing a solitary flower. Rootstock stout and fleshy.—Woods, shady hedge-banks, pastures. Flowering throughout the spring. Perennial. *p.* 37.

HYACINTH, *AGRAPHIS NUTANS. Nat. Ord., Liliaceæ.*—Perianth campanulate, six-partite; blue, more rarely purple or white. Inflorescence a raceme, each flower having two bracts at the base of the pedicel. Pedicels drooping during flowering, erect when plant in bud or fruit. Stamens six, alternate ones longer. Ovary ovoid; style filiform. Capsule obtusely three-angled, three-valved. Leaves long, linear, channelled, dark green, glossy. Root bulbous. Plant one foot high.—Hedges and woods. April, May. *p.* 41.

DANDELION, *TARAXACUM DENS-LEONIS. Nat. Ord., Compositæ.*—All the florets ligulate, bright yellow, outer ones often marked with purple on the back. Involucre of numerous erect and nearly equal inner bracts surrounded by other and larger ones more ordinarily lax and drooping. Peduncles radical, leafless, bearing single heads of flowers. Leaves obovate,

spatulate, deeply pinnatifid, runcinate. Pappus pilose. Root long, black, thick, very bitter.—Flowers almost the whole year round. Waste ground and meadows. Perennial. Abundant. *p.* 45.

BULBOUS CROWFOOT, or BUTTERCUP. *RANUNCULUS BULBOSUS. Nat. Ord., Ranunculaceæ.*—Calyx of five sepals, greenish-yellow, on expansion of flower closely reflexed, hairy. Corolla cup-like, of five petals, bright yellow, each having a nectary and small scale at its base. Stamens numerous. Ovaries numerous. Fruit an achene. Leaves very variable in form, cut into three lobes, or tripartite; upper leaves with linear segments. Stem one foot high, hairy, swollen at the base; peduncles furrowed.—Meadows. May, June. Abundant. Perennial. *p.* 49

COMMON ORCHIS, *ORCHIS MASCULA. Nat. Ord., Orchidaceæ.*—Perianth irregular, six-partite, five being very similar in form, the sixth called the lip, differing both in shape and direction, and spurred, three-lobed, outer sepaloid segments acute and reflexed. Flowers in a lax spike, purple, at times fragrant. Spur stout, obtuse. Bracts coloured. Stamens, confluent with the style into a central column, three, two of these abortive. Ovary with three receptacles. Capsule three-valved. Leaves spotted with dark purple, narrow, oblong, sheathing, mostly radical. Root having two tubercles.—April, May, June. Woods and meadows. Perennial. *p.* 53.

BROAD-LEAVED GARLIC, *ALLIUM URSINUM. Nat. Ord., Liliaceæ.*—Perianth stellate, of six lanceolate, acute, and spreading segments, white. About twelve flowers in each umbel, arising from a two-leaved spathe. Umbel flat-topped; pedicels rigid. Stamens six, all simple, attached to the base of perianth segments. Ovary three-angled. Style filiform; stigma minute. Leaves broad and flat, all radical, spreading, on long stalks, ovate-lanceolate, sheathing the base of the three-angled flowering stem.—Moist woods and hedgerows in shade. April, May, June. Perennial. *p.* 56.

YELLOW IRIS, or WATER-FLAG, *IRIS PSEUDACORUS. Nat. Ord., Iridaceæ.*—The outer segments of the perianth large, spreading, reflexed; the inner segments small, sub-erect; all bright yellow. Stamens three, inserted into the base of the sepaloid segments. Stigmas three, petaloid in character, covering the stamens. Two or three flowers on each stem, each issuing from a sheathing bract. Capsule green, large, three-angled. Leaves mostly radical, ensiform, equitant, stiff, erect, glaucous, upper leaves much smaller than the lower. Rhizoma large, creeping, acrid.—Wet meadows, by the sides of streams. May, June, July, August. Perennial. *p.* 57.

RED DEAD-NETTLE, or RED ARCHANGEL, *LAMIUM PURPUREUM. Nat. Ord., Labiatæ.*—Calyx five-cleft, teeth very acute, and as long as the tube, spreading. Corolla purple, throat much dilated; upper

lip arched; lower trifid, spreading. Stamens four, inserted in tube of corolla in pairs. Ovary of two carpels. Style slender. Fruit a nutlet. Leaves crenate, cordate, stalked; the lower ones on long stalks, opposite, exstipulate; the upper leaves very close together, often purplish, and covered with fine silky hairs. Whorls of flowers sub-terminal. In flower almost throughout the year.—Hedgerows and waste ground. Annual. *p.* 61.

WHITE DEAD-NETTLE, or WHITE ARCHANGEL, *LAMIUM ALBUM. Nat. Ord., Labiatæ.*—Calyx five-cleft, teeth very fine, acute, and spreading. Corolla white, tube bulging at base, throat dilated, upper lip very arched. Six to ten flowers in a whorl. The organs of reproduction similar to those of the last species. Leaves cordate, acuminate, acutely serrate, stalked, often thickly covered with coarse hairs.—On hedge-banks and waste ground. Flowers almost throughout the year. Perennial. *p.* 61.

GOLDILOCKS, *RANUNCULUS AURICOMUS. Nat. Ord., Ranunculaceæ.*—Sepals five, pubescent, spreading. Petals five, bright yellow, often imperfect, without the characteristic gland of the greater part of the genus. Stamens many. Carpels many. Style short. Fruit globose, a mass of achenes, downy. Peduncles smooth. Leaves few in number; radicals on long stalks, orbicular or reniform, and only slightly cut into lobes; the stem-leaves cut to the base into linear segments, either entire or very slightly serrate. The whole plant glabrous, without the acridity of many of the genus. Stem erect.—Woods. Flowering in spring. Perennial. *p.* 65.

WATER RANUNCULUS, or WATER BUTTERCUP, *RANUNCULUS AQUATILIS. Nat. Ord., Ranunculaceæ.*—Sepals five. Petals five, or at times more, obovate, much larger than sepals, white, each with a yellow spot at base; nectary without a scale. Stamens and carpels numerous. Leaves very various in form: floating leaves (often wanting) circular, lobed; submerged leaves capillaceo-multifid; stipules broad. Flower-stalks axillary, one-flowered. Without the acridity common to many of the plants of the genus. Stems slightly submerged.—Ponds and water-courses. Spring and Summer. Perennial. *p.* 67.

LARGER PERIWINKLE, *VINCA MAJOR. Nat. Ord., Apocynaceæ.*—Calyx five-partite. Corolla salver-shaped, five broad oblique segments. Cylindrical tube, æstivation twisted, generally purple, but varying in strength of colour. Stamens five; filaments short; anthers two-celled. Stigma one. Ovary of two carpels. Fruit a follicle of two elongated capsules, many-seeded. Leaves evergreen, opposite, entire, ovate, stalked. Flowers growing singly on peduncles springing from the axils of the leaves. Long, trailing, flowerless shoots, rooting; from these the flowering shoots ascend. Spreads with great rapidity.—Woods and shady hedge-banks. April, May, June. Perennial. *p.* 69.

LESSER CELANDINE, or PILEWORT, *RANUNCULUS FICARIA. Nat. Ord., Ranunculaceæ.*—Calyx of three sepals. Petals eight, but varying to twelve, golden yellow, very glossy; nectary with a small scale. Flower-stem bearing two or three leaves and a single terminal flower. Leaves undivided, petiolate, mostly radical, cordate, obtuse, angular, or crenate, thick, glossy; petioles with dilated stipular bases. Root having numerous tubers, annually renewed. Carpels large, in globular head.—Damp pastures and woods. March, April, May. Perennial. *p.* 73.

HAREBELL, *CAMPANULA ROTUNDIFOLIA. Nat. Ord., Campanulaceæ.*—Calyx ovoid, cut into five segments. Corolla bell-shaped, with five broad and spreading lobes, pale blue or occasionally white. Stamens five, free from corolla; filaments dilated at base; anthers linear. Style one, clavate, pubescent; stigmas filiform. Inflorescence a raceme or panicle, few-flowered; pedicels slender. Root-leaves orbicular or cordate, crenate, soon withering away; stem-leaves entire, linear or linear-lanceolate. Plant glabrous.—Open moorlands, banks, roadsides, old walls, hilly pasturage. July, August, September. Perennial. *p.* 77.

BUSH VETCH, *VICIA SEPIUM. Nat. Ord., Leguminosæ.*—Calyx, five sepals, gibbous at base, calyx-teeth unequal. Corolla of five petals, irregular, papilionaceous, dull purple. Stamens ten. Ovary simple. Style simple, with a tufting of hair beneath the stigma on the outer side. Peduncles very short. Inflorescence a raceme, few-flowered, starting from the axils of the upper leaves. Fruit a pod. Stem with prominently-projecting longitudinal ridges, one to two feet high, weak, stipuled. Leaves of six or eight pairs of ovate, truncate, mucronate leaves, the leaf-stalk ending in a branching tendril.—Woods, hedges. May, June, July. Perennial. *p.* 81.

STORK'S BILL, *ERODIUM CICUTARIUM. Nat. Ord., Geraniaceæ.*—Calyx of five sepals. Petals five, regular, obovate; pink. Inflorescence umbellate. Stamens ten, five being sterile and rudimentary. Stigmas five. Ovary five-lobed. Carpels awned. Leaves pinnate, having their segments deeply pinnatifid, serrated, stalked, radical. Stems erect, hairy, variable in length.—Waste ground and roadsides. June, July, August, September. Annual. *p.* 85.

BRAMBLE, *RUBUS FRUTICOSUS. Nat. Ord., Rosaceæ.*—Calyx five-lobed, free. Petals five, crumpled, perigynous, equal; lilac-pink. Stamens numerous, perigynous; anthers two-celled. Style short. Fruit an aggregation of succulent carpels round the dry receptacle, purplish-black, without bloom. Inflorescence paniculate. Stipules linear. Leaves of three or five leaflets, large, coarse, the leaflets ovate, serrate, downy beneath, veins prominent, midribs and stalks with small hook-like prickles. Stem long, arching, rooting, five-angled, armed with large prickles.—Hedges, commons, and thickets. July, August. Perennial. *p.* 89.

HONEYSUCKLE, *LONICERA PERICLYMENUM. Nat. Ord., Caprifoliaceæ.*—Calyx globular, having five small teeth. Corolla having an elongated tube, five-cleft, irregular. Flowers in heads, sessile. Stamens five. Style filiform, and stigma capitate. Fruit a berry, growing in red clusters. Leaves ovate, glabrous above and downy beneath; the lower ones stalked, the upper sessile; in pairs, entire. Stems long, woody, climbing.—Woods and hedges. June, July, August, September. Perennial. *p.* 93

VALERIAN, *VALERIANA OFFICINALIS. Nat. Ord., Valerianaceæ.*—Calyx tube adnate with ovary, the border opening out after flowering into a feathery pappus. Corolla five-lobed, gibbous, small. Stamens three. Ovary one-celled. Fruit dry, one-seeded, indehiscent. Inflorescence corymbose. Leaves pinnate or pinnatifid; segments lanceolate, deeply toothed, very variable in number; upper leaves few, small, and of few segments; lower leaves on long foot-stalks. Flowering-stems erect, simple, or very slightly branching.—Damp hedgerows, moist woods, sides of streams. June, July, August. Perennial. *p.* 97.

SMALL KNAPWEED, *CENTAUREA NIGRA. Nat. Ord., Compositæ.*—Florets purple, all equal, or at times the outer row larger and sterile; disk florets perfect. Achenes compressed, crowned by ring of minute bristles. Flower-heads borne on terminal peduncles. Involucre globular; bracts imbricate, deeply fringed. Leaves rough to the touch, varying in form; lower leaves stalked, lobed, sublyrate; upper, linear-lanceolate, entire or slightly toothed, sessile. Stems erect, wiry, freely branched.—Meadows, hedgerows. June, July, August, September. Perennial. *p.* 101.

COWSLIP, or **PAIGLE**, *PRIMULA VERIS. Nat. Ord., Primulaceæ.*—Calyx five-toothed, the teeth broad and obtuse, tubular, campanulate, pale yellowish-green. Corolla funnel-shaped, tube cylindrical, the limb deeply five-lobed, each lobe notched, yellow, spotted at base with orange. Stamens five. Ovary one-celled. Style one, filiform; stigma capitate. Flower-stalks rising above the leaves, and bearing the flowers in an umbel; outer flowers pendulous. Stem cylindrical, downy. Leaves all radical; petioles winged.—Meadows and banks. April, May. Perennial. *p.* 105.

TOAD-FLAX, *LINARIA VULGARIS. Nat. Ord., Scrophulariaceæ.*—Calyx five-cleft; sepals ovate or lanceolate, small. Corolla monopetalous, personate, spurred; mouth closed by projecting palate; spur in a line with the flower. Flower pale yellow, the palate bright orange. Stamens four, attached to tube of corolla. Ovary and capsule having two cells; capsule ovoid. Inflorescence a densely-flowered raceme. Bracts linear. Leaves very numerous, linear-lanceolate, glaucous. Stem erect, one to two feet high.—Hedges and waste ground. July, August, September. Perennial. *p.* 109.

PINK PERSICARIA, *POLYGONUM PERSICARIA. Nat. Ord., Polygonaceæ.*—Perianth five deeply-cut segments; pink. Inflorescence spicate, terminal, compact, cylindrical. Stamens six, inserted into base of perianth. Styles two or three. Stipules sheathing, and fringed with short bristly hairs. Achene wingless, compressed, gibbous. Leaves lanceolate; lower ones on stalks, the upper ones sessile; glabrous, often with dark blotch in centre, entire. Stems smooth, erect, jointed, freely branching, brittle. Root fibrous. —Waste places, moist ground, ditches, and roadsides. July, August, September. Annual. *p.* 113.

TORMENTIL, *POTENTILLA TORMENTILLA. Nat. Ord., Rosaceæ.*—Calyx ordinarily eight-cleft, the alternate divisions being smaller. Petals ordinarily four, but occasionally five; bright yellow. Style short, simple. Stamens peryginous; anthers two-celled. Carpels many. Fruit a mass of minute achenes on a common flat receptacle. Lower leaves often stalked; upper ones sessile, digitate; segments lanceolate, deeply serrate, alternate, having stipules. Stems freely forking, procumbent or ascending; peduncles axillary. Root-stock large and woody.—Moors and dry pastures. June, July, August. Perennial. *p.* 117.

CINQUEFOIL, *POTENTILLA REPTANS. Nat. Ord., Rosaceæ.*—Calyx ten-cleft, the alternate segments being smaller. Petals broad, five; bright yellow. Flowers singly on long peduncles, axillary. Achenes numerous, small, placed on a flat, dry receptacle. Leaves all stalked, five or seven obovate, coarsely serrated leaflets. Stems rooting at joints, slender, prostrate, freely running. Stipules ovate, entire.—Meadows and hedge-banks, roadsides. June, July, August, September. Perennial. *p.* 117.

TUTSAN, *HYPERICUM ANDROSÆMUM. Nat. Ord., Hypericaceæ.*—Calyx of five broad sepals, unequal, as long as petals. Corolla of five petals, large, deciduous. Flowers few in number, grouped at ends of the branches. Twisted in æstivation. Stamens numerous, pentadelphous. Styles three, short. Ovary three-celled. Fruit baccate; seeds numerous. Leaves in pairs, sessile, cordate at base, obtuse, large, with small pellucid dots. Stalk short, woody.—Hedges, copses, open woods. June, July, August. Perennial. *p.* 121.

CORN SOW-THISTLE, *SONCHUS ARVENSIS. Nat. Ord., Compositæ.*—Florets all ligulate and perfect, homochromous. Stamens five; anthers syngenesious. Ovary one. Style one, sheathed by the anther-tube, branched; stigmas forming two rows along the inner surfaces of the branches of the style. Flower-heads large, bright yellow paniculate. Achene compressed, striated, beakless. Pappus soft and silky, white. Peduncles and involucre glandulose-hispid. Leaves long, pinnatifid; upper leaves clasping the stem; lower leaves stalked, runcinate, all serrate. Root-stock large, creeping.—Cornfields. August, September. Perennial. *p.* 125.

GREATER WILLOW-HERB, *EPILOBIUM HIRSUTUM. Nat. Ord., Onagraceæ.*—Calyx four-cleft. Petals four, erect at base, notched, spreading, conspicuous; pink. Flowers regular. Stamens eight, inserted in calyx, erect, four longer than the others. Style filiform, erect; stigma deeply cut into four lobes. Pod long, quadrangular, four-celled, many-seeded. Seeds having tuft of silky hairs at one extremity. Leaves partly clasping stem, ovate, lanceolate, hairy, serrate. Stem freely branching, erect, rigid, stout. Root creeping.—Damp low-lying ground, osier-beds, and margins of streams. July, August. Perennial. *p.* 129.

HAWTHORN, *CRATÆGUS OXYACANTHA. Nat. Ord., Rosaceæ.*—Calyx tube urceolate, five-lobed, non-glandular. Petals five, rounded, white or pink. Flowers fragrant, in sessile corymbs. Stamens many; the pink anthers very conspicuous. Styles one to three. Fruit crimson, ovoid, hard, the cells being cartilaginous. Armed with sharp thorns, abortive branches. The leaves very variable in form, petiolate, divided into three or five lobes, serrate. Large and leafy stipules. A shrub or small tree, freely branching. —Perennial. May, June. Hedges and woods. *p.* 133.

FLEABANE, *PULICARIA DYSENTERICA. Nat. Ord., Compositæ.*—Flower-heads large, terminal or springing from axils of upper leaves. Rays very numerous, linear, widely spreading, bright yellow. Involucre hemispherical, closely covered with numerous small and narrow scales. Leaves simple, alternate, cordate at base, embracing stem, very waving in outline, downy. Stem branching, downy.—Ditch-sides, damp pasturage, roadsides. July, August, September. Perennial. *p.* 137.

TOUCH-ME-NOT, *IMPATIENS NOLI-ME-TANGERE. Nat. Ord., Balsaminaceæ.*—Sepals four or five, one spurred and recurved, very irregular in structure. Petals also variable, yellow, orange-spotted, ordinarily two. Both calyx and corolla coloured. Stamens five, filaments more or less united and very short. Anthers cohering. Ovary five-celled. Stigmas five, sessile. Peduncles many-flowered, slender. Fruit a capsule, having five elastic valves, rolling back suddenly when touched, when ripe. Leaves exstipulate, alternate, ovate, serrate, petiolate, flaccid. Stem succulent, swelling at the joints, and snapping readily at those points, erect, branching. —Moist woods. July, August, September. Annual. *p.* 141.

BINDWEED, *CALYSTEGIA SEPIUM. Nat. Ord., Convolvulaceæ.*—Calyx of five sepals, with two large bracts. Corolla campanulate; pure white. Peduncles single-flowered. Stamens springing from base of corolla. Style simple; stigma two-lobed. Capsule two-valved. Leaves sagittate, entire, lobed at base. Stems long, weak, climbing. Rootstock creeping.—Hedge-rows and woods. June, July, August. Perennial. *p.* 145.

HOP TREFOIL, *TRIFOLIUM PROCUMBENS. Nat. Ord., Leguminosæ.* — Calyx of five unequal teeth. Corolla papilionaceous, petals narrow, cohering

by their claws, persistent; the standard deflexed after flowering, and striate. Stamens ten, diadelphous. Ovary one-celled. Style and stigma one, Flowers small, in dense, oval, many-flowered heads, on long axillary peduncles. Pod scarcely projecting beyond calyx, two-valved. Leaves alternate, stipulate, trifoliate, stalked; leaflets serrate, obcordate. Stipules broad and pointed. Stem erect and procumbent, freely branched at base.—Dry pastures and hedge-banks. June, July, August. Annual. *p.* 149.

WOOD SORREL, *OXALIS ACETOSELLA. Nat. Ord., Oxalidaceæ.*—Calyx of five short ovate sepals, membranous, ciliate, tinged with purple, persistent. Petals five, retuse, ovate-cuneiform, striate with purple veins; claws small, yellowish. Flowers solitary, fragile looking, drooping. Stamens ten, five shorter than the others. Ovary superior, roundish, bearing five erect and filiform styles. Fruit capsular, membranous, five-celled, five-valved. Leaves radical, on long, slender, naked petioles; each composed of three equal, entire, obcordate leaflets, purplish beneath; hairy, spreading, drooping at night. Flower-stems with two ovate, scaly bracts. Root-stock creeping, jointed scaly.—Woods and shady hedgerows. May. Annual. *p.* 153.

YELLOW RATTLE, *RHINANTHUS CRISTA-GALLI. Nat. Ord., Scrophulariaceæ.*—Calyx greatly inflated, four-toothed, flattened, contracted at mouth. Corolla irregular, monopetalous, deciduous; upper lip compressed, entire; lower lip spreading, three-lobed. Stamens four, in pairs. Style one. Stigma two-lobed. Capsule two-celled, flattened, orbicular. Flowers in axils of upper leaves, forming loose spike. Leaves sessile, opposite, coarsely serrate, lanceolate, prominently veined. Stem erect, smooth, branching, spotted.—Pasture land. May, June, July. Parasitic. Annual. *p.* 157.

FAMILIAR WILD FLOWERS.

THE FIELD CONVOLVULUS.

Convolvulus arvensis. *Nat. Ord., Convolvulaceæ.*

BEAUTIFUL as this flower is, the plant which bears it must fairly be ranked amongst the most troublesome of weeds to the agriculturist. Its roots run very deeply into the ground, and extend over a large area; it is, therefore, exceedingly difficult to extirpate it, and in any attempt to dispossess it the long and rather brittle roots are apt to snap, and portions of them very possibly not attracting notice, and getting buried beneath the soil, very soon grow again as vigorously as ever. No half-measure will meet the exigencies of the case; the plant is only crippled awhile, and in a very short time its dense rosettes of small leaves are seen spreading over the ground as vigorously as before. The field convolvulus is the *Convolvulus arvensis*

of science. The generic name is derived from the Latin verb *convolvo,* to twine around or about, and is very descriptive of the general growth of the plant, as it does not, like many climbers, support itself by tendrils, but the whole plant is twisted round the object that supports it, ordinarily a stalk of corn or some such upright form having a rather small diameter; it will never, for instance, be found twining round a gate-post or other such bulky thing. Very frequently, when found on hedge-banks, it rambles amidst the grass and other coarse herbage, and climbs but little, if at all. It is sometimes called the small bindweed; small, because there is another species, the especial foe of the gardener, having much larger flowers, of which also we shall give an illustration in our series; and bindweed, from this habit of twining round and matting the other plants in its neighbourhood together. The specific name *arvensis* is derived from the Latin word *arvum,* signifying a corn-field. The field convolvulus, the plant now more immediately under consideration, is one of the characteristic flowers of the corn-field, though it is found very commonly in other arable ground, waste places, and hedge-banks. Its blossoms, veined with delicate pink, are very sensitive to sunlight, and expand readily to the beams of light and warmth, but remain closed whenever the sky is cloudy and overcast—a peculiarity that gave us a good deal of trouble in making our drawing, as the most beautifully-expanded blossoms, when picked and brought home, closed almost directly. All the various kinds of convolvulus present this same feature; they therefore become, in spite of the beauty of many of the garden species, quite unfit for the flower-vase or any kind of floral decoration. The large deep blue or purple blossoms

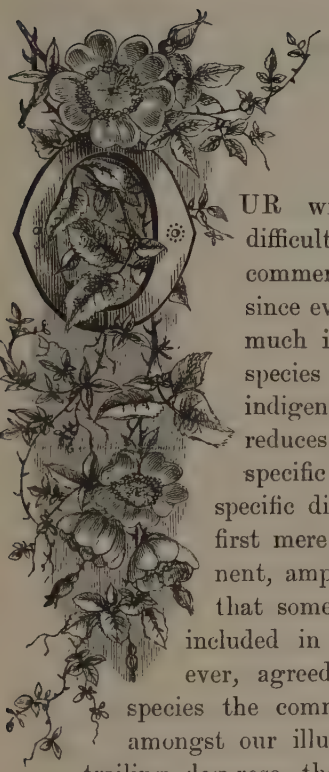
that look so beautiful in themselves, and are so valuable in colour effect from the comparative dearth of blue flowers, especially at the time of year when they are in blossom, close almost directly they are gathered, and leave but an unsightly gap as the token of their past occupation of the spot they were intended to fill.

The leaves of the field convolvulus are very variable in form; those represented in our drawing may be considered as very fairly typical, but they are at times found with the extremity of the leaf far more acute, and the lateral lobes at the base much more elongated. The leaves are given off singly from the stem, and from their axils, the point at which their stems join the main stem, the flower-stalks rise. These flowering stalks generally fork into two smaller ones, each bearing a bud; one of these lesser stems is almost invariably smaller than the other, and bears a bud in an earlier stage of development, so that though the buds are found in pairs on the flower-stems, the flowers are, as shown in our drawing, found singly. We do not remember ever to have seen both the flower-buds of the flowering stem equally ready to expand. At the point where the flower-stem forks off, two very small scale-like forms are found, and on one, and always one only, of the little branchlets thus thrown off a second pair of these small bracteal forms will be seen. In some plants these flowering stems do not fork into two, but, nevertheless, at about the same point as in the others—that is to say, at the point where one, judging by observation of other specimens, would expect to see it divide off into two—the pair of small bracts is found.

In one piece of this plant that we gathered, when searching for material for our plate, the whole of the

flowering stems, which were as many as nine in number, bore but one bud each. This probably arises from a starved condition of things, as in such a case the leaves also are but small, and the whole plant seems in but a feeble state of development. The flowers are of the form known as campanulate, or bell-shaped, though they are by no means so characteristically bell-like as the well-known blossom of the hare-bell and several other equally familiar species. The blossoms vary a great deal in colour; in some plants they are almost entirely white, while in others the normal delicate pink becomes intensified almost to crimson. As these variations of colour may readily be noticed as occurring in the plants covering a very limited area of ground, it becomes difficult to account at all satisfactorily for so great a difference in plants that apparently are all under the same conditions of growth. The plant is a perennial. It generally begins flowering about the first week in June, after which date it may be found in blossom throughout the summer and autumn months.

FIELD ROSE.



THE FIELD-ROSE.

Rosa arvensis. *Nat. Ord.*, *Rosaceæ.*

OUR wild roses present a somewhat difficult field of study to one who is commencing to observe wild flowers, since even professed botanists differ very much in opinion as to the number of species that may fairly be considered indigenous to Britain. One authority reduces all the varying forms to five specific types, while another, seeing specific differences in what appear to the first mere variations more or less permanent, amplifies the list to such an extent that some nineteen or twenty species are included in it. All authorities are, however, agreed in recognising as legitimate species the common dog-rose, elsewhere figured amongst our illustrations, and the field-rose, or trailing dog-rose, the subject of our present plate. The field-rose is the *Rosa arvensis* of the botanist. The generic name, *Rosa,* will be found explained in our remarks on the common dog-rose, while the specific title, *arvensis,* signifies that which pertains to the fields, being derived from the Latin word *arvum,* a corn-field; we meet with the word again in the *Anagallis arvensis,* or pimpernel, the *Ranunculus arvensis,* or corn-crowfoot, and many other plants.

The field-rose is ordinarily a much more trailing plant than the common dog-rose, a feature that distinguishes it in a marked degree from all our other wild roses. The general form of the leaves is much the same as in the dog-rose, but they are often rather smaller and more shining in surface; the prickles, too, are somewhat smaller in size, but more hooked. The flowers are white, with comparatively little or no scent, and though at times solitary, are more commonly found in small bunches of three or four at the ends of the branchlets. It will readily be understood that these small bunches rarely consist entirely of expanded flowers, but more ordinarily of buds and blossoms in various stages of development. The fruit is much more globular in form than that of the common dog-rose, which is ordinarily described as resembling a small flask. The field-rose is very widely distributed throughout England, but is much more sparingly met with in Scotland and Ireland. It ordinarily comes into blossom somewhat later in the summer than the dog-rose, and may also be found for some time after that species has ceased to bear its flowers. From the profusion of its blossom it is a great ornament, not only when the hedgerow is laden with its long trailing stems and beautiful flowers, but also later on, in the autumn, when these flowers have passed away, and are replaced by the scarlet fruit, the "hips," as these and other wild rose seeds are called, a word derived from *hiope*, their Anglo-Saxon name. The fruit of the sweet-briar, an allied species, is egg shaped, its broader part being uppermost or farthest from the stem. The stems of the various kinds of wild rose may often be found tufted with curious little balls of crimson moss.

These result from the puncture of a small insect, in much the same way as the galls of the oak are formed. In the Middle Ages these rose-galls were held in high repute in medicine, under the name of *bedeguar*, but this repute has, in these later days, gone the way of much else of the wisdom of those early times.

Five forms of rose are sufficiently distinct to present no difficulty in their identification by the amateur botanist —the dog-rose, the field-rose, the sweet-briar, the burnet rose, and the downy rose. The first two of these need no further comment. The sweet-briar, or *R. rubiginosa*, will ordinarily be readily recognised by the well-known odour of its foliage. It is chiefly found in the south of England, and appears to thrive best on the chalk. It is sometimes cultivated in gardens for its fragrance—a fragrance that is often very faint in wild specimens. The burnet rose is the *R. spinosissima*. The specific name signifies exceedingly prickly, the Latin superlative being used to give emphasis to the painful fact that all its stems are armed with numerous straight thorns. It is called the burnet rose because its leaves, being small, and having seven or nine leaflets to each leaf, are very similar in general form to those of a plant called the burnet. The downy rose, *R. villosa*, is so called from the downy texture of both sides of the leaves; the specific name is a Latin adjective conveying this meaning. Its flowers are white or pale pink. The fruit, which is globular, is covered with fine prickles. The downy rose is common in Scotland, Ireland, and Wales, but is only found in England in the north and west. It is a species subject to a considerable amount of variation of form, and five or six other species have been based on these modifications of the type.

The various species of rose furnish several useful preparations. The "hips" have the honour of a place in the modern pharmacopœia. The outer part is succulent and pulpy, and of a sweetish acidulous taste, the woolly or hairy lining must, however, be carefully removed, as it is very irritant in its nature. The pulp is beaten up with three times its weight of white sugar; it is then the conserve of roses, or *Confectio Rosæ Caninæ* of the dispenser. It is slightly refrigerant, but is chiefly valuable as a vehicle for other medicines.

MEADOW CRANE'S-BILL.

THE MEADOW CRANE'S-BILL.

Geranium pratense. Nat. Ord., Geraniaceæ.

HOUGH the subject of our present illustration is much more confined to special localities than many of the other flowers we have selected, it is, when encountered at all, usually found in great profusion. We had ourselves been interested in our indigenous flora for years before the plant came under our notice, though these present pages are written in a district where it is one of the commonest plants. Where it occurs it can scarcely fail to command attention, not merely from the profusion of it being itself sufficient to enforce notice, but from the large size and beautiful colours of its blossoms, and the large clumps of richly-cut leaves —a deep green in the summer months, and in those of autumn crimson, orange, and purple in countless varying tints. The plant appears to thrive best where there is a considerable amount of moisture, hence it will be found in lowly-lying pasturage, and in rocky and mountainous districts near the numerous

streams that, as they dash over their stony beds or fall in glittering cascades, scatter their spray over the banks, and cause a constant humidity that is particularly welcome to many species of flowering plants and ferns. The meadow crane's-bill again may often be found in woods and thickets, spots that at once strike us, on entering them from the hot and dusty road, with a feeling of ordinarily delicious contrast, though the chilly dampness that may at times exert a too penetrating power is as injurious to most plants as it is disagreeable to ourselves. When growing under the circumstances we have pointed out, the plant, though possibly more luxurious than when found by the road-side, has not in autumn the beautiful richness and variety of colour in the foliage that is seen in those that have been more exposed to the direct rays of the sun, that great cause of all lovely colour, whether in the sevenfold tints of the bow in heaven, the soft bloom of the ripening peach, or in the commonest wayside blossom that turns its little earth-born stars to the great source of life, and light, and beauty.

The meadow crane's-bill may chiefly be found in most parts of southern and central England; in the north of England and in southern Scotland it may also be met with; while in the north of Scotland and throughout Ireland, the latter a land that in many places would appear to be especially adapted to its favourite conditions of growth, it is quite unknown. From its beauty it is not uncommonly transferred to the garden. The plant will ordinarily be found in flower by about the end of May, and lasts in fair blossom for some considerable time, a few isolated specimens here and there being pro-

curable until quite late in the autumn. The deeply-cut leaves, and the large size and light bluish-purple tint of the blossoms effectually distinguish it from all our other species of crane's-bills.

The meadow crane's-bill is the *Geranium pratense* of scientific nomenclature. The generic name is derived from the Greek word for a crane, *geranos*, the form of the fruit being supposed to be somewhat suggestive of that of the bill of a crane, whence also its common English name crane's-bill. The resemblance is but faint, but in the olden times they do not appear to have been very critical on these points, and a name once given is not readily shaken off again, even if a better could be suggested in its place. The specific name *pratense* is a Latin word, and signifies that which grows in meadows; its ordinary appellation, the meadow crane's-bill, is therefore a much more literal reproduction of its botanical title than is often the case in plant names.

The large size of both flower and leaf prevents our giving much of the growth of the plant on our plate, and, indeed, the limited space at our disposal has, even as it is, compelled us to do but scant justice, for though the flowers are of natural size, the leaf is much smaller than an average specimen. It will be noticed that a line that would just go round and enclose the leaf within it would not be far from a circle, and in a fairly representative leaf such a circle would be from six to eight inches in diameter.

The meadow crane's-bill is a perennial. The stems fork a good deal, and are somewhat swollen at the various joints; they attain to almost a yard in height. The leaves are dark green, and from the absence of all glossiness appear somewhat dull in effect; they are very deeply divided,

ordinarily into five or seven radiating segments, and these in turn are divided into smaller masses. The flowers are of a rather light tint of bluish-purple, veined slightly with a purple inclining to red; at times a variety having pure white flowers may be found. This variation of the flowers would appear to arise from no weakness of growth on the part of the plant, as the white-flowering variety when discovered will ordinarily be found to be quite as robust as the normal form, and would, in fact, were it out of blossom, be indistinguishable. We have seen them planted together in clumps in country gardens, and the association is a very effective one, the pure white and delicate lilac-purple blossoms blending admirably together. After the flower has died away the stem that supported it falls, and gives a very quaint angularity of effect to the head of blossoms, a feature that is prominently shown in our illustration. The flowers grow in pairs, though they do not always expand simultaneously.

SILVERWEED.

THE SILVERWEED.

Potentilla anserina. Nat. Ord., Rosaceæ.

FROM the beauty of its leaves and the large size of its flowers, the silverweed is sufficiently attractive and conspicuous to be familiar to most lovers of plants. The name silverweed is an especially appropriate one, as the foliage is so thickly clothed with a silky white down or felting of soft hair that the general effect has the greyish white appearance that is noticeable in frosted silver, and the plant is for the same reason called by some of the older writers the argentina, from the Latin word *argentum,* silver. The scientific name of the plant is *Potentilla anserina,* the first or generic name being derived from the Latin adjective *potens,* powerful, in allusion to the medicinal properties of some of the species forming the genus, while the second or specific name, *anserina,* is from the Latin *anserinus,* that that pertains to a goose. We are quite unable to explain why such a specific title should have been affixed to the plant, possibly it may be because geese are fond of it, though on this point we can only venture on a surmise; possibly because it is flowering about the

time that the little goslings—little masses of grey and yellow down—are running amidst its flowers and foliage, and the similarity of colour may have struck some early observer. The difficulty of explaining the meaning of the name is only intensified, not removed, when we find some of the early herbalists calling it the goosewort. Another common name for it is the prince's feather, a by no means bad name, as the long pinnate leaves have a curve in the central axis, and a drooping of the ends of the individual leaflets that is very suggestive of the ostrich feathers that form the crest of the Prince of Wales, and the grey effect of the leaves, so different in appearance from the ordinary shades of green met with in the foliage of most plants, adds to the resemblance. The meaning of the word pinnate, applied botanically to leaves of this form, a central line with lateral leaflets given off on either hand, is simply feathery—the Latin word *pinna*, a feather, supplying the root of the word. Though the name, so far as we are aware, is never used now, it is in old books called the trailing tansy, from a certain degree of likeness, very slight however, which it bears to the tansy. The plant is very abundant in Britain, and indeed throughout the temperate regions of the world, extending from Lapland to the Azores, and being equally at home in regions so remote from ourselves and from each other as Armenia, China, New Zealand, and Chili. All soils appear equally congenial to its growth. Like the periwinkle, the subject of another plate, the silverweed spreads rapidly by means of its long creeping runners, and is, therefore, when found at all, met with in profusion. The leaves are what is botanically termed interruptedly pinnate, that is to say, there is not a steady increase of size in the

pairs of leaflets as they succeed each other, as in the case of the ash and many other plants, but the longer leaflets are, as will be seen in our drawing, separated from each other by others very much smaller. This form of leaf may also be very well seen in the avens, the agrimony, and several other species, and is at all times a beautiful form, the little alternating leaflets giving great richness and a certain piquancy that is very pleasing. The leaves vary a good deal in the silky greyness that is so characteristic a feature, and the under side is generally greyer in effect than the upper. When growing under adverse circumstances, the plant is greatly dwarfed, and the leaves will then be often but from two to three inches long; they are, however, as rich in form as those grown under more favourable conditions, and are generally more characteristically grey than those which, from having grown in the midst of other foliage in the hedge-bank have become attenuated, and have in other ways lost some of their individuality, and are less typical of the plant than when developed in a more open situation. The very marked and deep serration of the outlines of the leaflets is another noticeable feature. The flowers are thrown up on long stalks, each stem bearing but one blossom, and it will be perceived that while the parts of the corolla are five in number, the calyx is cleft into ten divisions.

The silverweed is abundant in poor pasturages, particularly where the ground is naturally damp and low, but it may also be very freely found by the dusty roadside; in such a locality the plant is but poorly developed, and never attains to any great size, spreading laterally, but scarcely rising at all from the surface of the road, and having the flower-stems but an inch or two in length. On open

downland it may often be met with, not on the slopes or summits, but in the depressions, the greater dampness of these being favourable to its development, and we have often, in such localities, seen large surfaces of ground of which it has taken almost exclusive possession.

The plant ordinarily commences flowering about the middle of May, and continues in blossom throughout the summer, and a few laggard flowers may even be met with so late as October. May, June, and July may, however, be taken as the time when the plant is in its best state, and producing most lavishly its striking and conspicuous golden flowers.

No medicinal or commercial value is now attached to the plant, though naturally in the Middle Ages, when almost everything had its healing powers firmly believed in, the silverweed was laid under contribution, and like almost all our wild plants, was employed to relieve a number of ailments—sciatica, ague, inflammation, for example—of the most varied nature, but all at least agreeing in acknowledging the potency of the little silverweed, as the one remedy for them all.

APPLE.

THE APPLE.

Pyrus Malus. Nat. Ord., Rosaceæ.

WHEN covered with a mass of pink-and-white blossom in the month of May, the apple-tree forms a really beautiful sight. It is, perhaps, hardly so commonly met with as some of our familiar plants, but is not unfrequently found in woods and hedges. Botanically it is the *Pyrus Malus*. The flowers, it will be noticed, grow in umbels, or little bunches, at intervals on the branches, and are succeeded by small austere fruit, commonly called crabs or crab-apples. Unpromising as they appear when tasted in this wild state, they are yet the originals of the numerous kinds of apple under cultivation. The generic name is derived from the Latin *pirum*, a pear, the specific from the Latin *malum*, an apple, a word, however, used by the Romans to denote several other fruits of a like character, such as quinces, pomegranates, pears, and citrons; thus Virgil speaks of "aurea mala"—*i.e.*, quinces; while in Horace we find, "ab ovo usque ad mala," the word

in this case referring to the various fruits forming the dessert that, as with ourselves, marked the end of the repast. We see very much the same application of a general term to a particular and limited use in the French word, *pomme*, for the apple, the Romans applying the term *pomum* to any fruit growing on a tree, and by no means confining the word to the apple exclusively. Our English word is derived from the Anglo-Saxon *æpl*, the name under which the fruit was even in the long by-gone days appreciated and cultivated. Gerarde, in his work on plants, published in the year 1596, speaks of a valuable ointment that had been lately introduced, which was called pomatum. It was used to beautify the skin, and was compounded of the pulp of apples, lard, and rose-water. From the fruit of the crab verjuice is made, which, when fermented and sweetened, makes a not unpleasant drink; it is also in its natural state sometimes added to cider to give it greater roughness and tartness. The fruit, though so intensely sour to the taste, is, when ripe, very attractive to the eye, the rosy clusters being very tempting-looking, and not at all indicative of the disappointment in store for the novice, who, presuming on their attractiveness, desires a yet closer acquaintance. The fruit has, in fact, contributed a word to the language, crabbedness being a very sufficiently expressive word when applied to a disposition the reverse of sweet. The wood of the apple is very hard—a crab-tree cudgel is proverbially a tough one—and is very frequently used in turnery; and the trunk of the wild apple is preferred for this purpose to that of the cultivated trees. The great use, however, of the cultivated varieties, beyond the employment of the fruit for cooking and eating purposes, is in the making of

cider. The mistletoe is more partial to the apple than to any other tree, and grows as freely upon the crab-apple as on the various kinds of apple in cultivation. While an interesting plant in itself, its parasitic growth renders it ultimately very injurious to the tree which supports it, though as it often appears to thrive best on trees that are already past their prime, it may be a question whether it may not in time become a more valuable product of the tree than the natural fruit, as many tons of it are found well worth the sending every winter from the great orchards of the western counties to the metropolis and other large towns.

It is a curious and noticeable fact that the wild apple, like the wild plum, has its branches armed with thorns, and that in both cases these uncomfortable and aggressive features are lost under the softening influence of cultivation.

Probably we owe many of our cultivated species of apples, as we owe many other valuable things, to the Romans. Pliny speaks of the cultivation of twenty-two different varieties, and no doubt the Norman conquest was also the means of other varieties being introduced, for our readers must not conclude too hastily that since all our cultivated varieties have sprung from the wild crab-apple, they have of necessity been the result of English skill alone. The crab-apple is no less a native of most of the other countries of Europe than it is with us, and the cultivation of the fruit has engaged the attention and rewarded the skill of many beyond the limits of our island home.

Tusser, writing in 1573, mentions in his catalogue "apples of all sorts;" while Parkinson, in 1629, is more

explicit, and enumerates fifty-seven. Evelyn, in the preface to his "Pomona," written some thirty years or so after Parkinson's book, says, "It was through the plain industry of one Harris, a fruiterer to Henry VIII., that the fields and environs of about thirty towns in Kent only were planted with fruit from Flanders to the universal benefit and general improvement of the county." Hartlib, writing in 1650, speaks of "one who had two hundred sorts of apples." In more recent catalogues about three hundred kinds are ordinarily specified, but such lists are always fluctuating, as old kinds grow out of favour, and are superseded by others, which, if better, retain their ground, or if they do not justify their early promise are erased from the list. The crab-apple furnishes, from its vigour and hardiness, a very useful stock on which to graft.

The wild pear, *Pyrus communis*, and the service tree, *P. torminalis*, are other indigenous species of the genus. The blossoms are in each case pure white, and may be found at the same time as those of the apple. The pear tree is about equally common with the crab, while the service tree is somewhat more local in its range.

BORAGE.

THE BORAGE.

Borago officinalis. Nat. Ord., Boraginaceæ.

AT first sight the subject of our present illustration scarcely seems to have full claim to rank amongst our indigenous plants, but it has been so long cultivated in gardens, and is so frequently met with on waste ground and rubbish-heaps, that it is thoroughly naturalised, and is often found under circumstances that forbid us to believe that it is a recent escape from cultivation. The borage was held in high repute in the Middle Ages, and was largely grown in the herb-garden; and it is very possible that this is the cause that we now find it so widely distributed, as when it is once established in a garden, we know by experience that it is a very difficult plant to entirely eradicate. This fact would act in two ways: it would, in the first place, make it sometimes necessary to get rid of it in the garden, as, instead of keeping in reasonable bounds, it is greatly given to encroach on land wanted for other purposes; and, secondly, this strong vitality would enable it to survive when flung out on

the rubbish-heap, and there to spring up anew in a position where it would probably not be disturbed again. It flowers during June and July, and, when well out in blossom, is a very attractive plant, the pure blue stellate blossoms telling with great effect in the midst of the rather dull-looking foliage.

The borage is the *Borago officinalis*, the only species of the genus that is found in Britain. According to some authorities the generic name is derived from the two Latin words—*cor*, the heart, and *ago*, I bring, and thence corrupted into *borago*, there being an old belief in its power of imparting courage to those who had sufficient faith in its efficacy to administer it to themselves. The old adage, "I, borage, give courage," is an indication of this faith in its virtue. As this derivation has not, however, proved altogether satisfactory, another has been started in a new direction—it may be considered an old friend in a new guise. It is suggested that *borrach*, a Celtic word meaning a man of courage, may be the true solution. In many of the older works on plants the word has the "r" doubled, and this at once suggests that possibly the derivation may be of quite different character; and as we find that this plant, whose true home is in the countries fringing the Mediterranean, bears very similar names in those countries to that borne by it in our own, except that with them the "r" is always doubled, we begin to feel that possibly our name is but a corruption of these, and that any attempt to build up a theory on a mutilated word is likely to end in a failure. The plant is, in Spain, the *borraja*; in Italy, *borraggine*; in France, the *bourrache*; in Germany, the *borretsch*. On turning now to those languages for some

key, we find that in the Italian tongue *borra*, in the French *bourra*, signify short hair or wool, both words probably being derived from the low Latin *burra*, a flock of wool. As the plant is in an especial degree thickly clothed with short hairs, so thickly, indeed, as to give it almost a downy, or at other times a frosted look when the light catches on their silvery tint, this last explanation of the meaning of the word is, without doubt, the correct one.

The plant is rather spreading in growth, and rarely attains to more than a foot or so in height. The leaves are somewhat lanceolate in form, and very rough in texture. The flowers are large, and of a brilliant blue, a feature that tends to render them additionally attractive, as we have very few plants that are purely blue. Crimson flowers are common, yellow flowers are especially abundant, but the azure blue of heaven is suggested by but few of our blossoms. The corolla is composed of five sharply-pointed members, and when fully expanded is quite flat; all the parts are in one plane, as in the pimpernel and some few other flowers. The stamens are very dark purple, so dark as to appear almost black, and form a very prominent and projecting conical mass in the centre of the flower. There is a curious ring of slightly-projecting scales at their base. The calyx, like all the rest of the plant, with the exception of the corolla, is thickly clothed with hairs, and is deeply cut into five long and narrow segments. The flowers grow on a long curving stem, the buds drooping, but the expanded blossoms often growing so that instead of the general plane of the flower being, as it is in most plants, more or less parallel to the ground, it is perpendicular to it. A comparison in the reader's

mind between the way in which a daisy flower and a pansy flower grow will, we think, suffice to explain what we mean.

It would appear that much of the value attached to the borage in the Middle Ages had but little foundation in fact. The only use to which it is now put is to give a pleasant flavour and coolness to some few beverages; the more potent influences ascribed to it by the old herbalists seem to be now lost. Gerarde recommends its use in salads, "to make the mind glad." Parkinson, another great writer on herbs, again commends it "to expel pensiveness and melancholie." Bacon says that it "hath an excellent spirit to repress the fuliginous vapour of dusky melancholie;" while Culpeper, in his medical treatise, finds the plant ample employment, putrid and pestilential fever, the venom of serpents, jaundice, consumption, sore throat, and rheumatism being only a few of the ailments for which it is prescribed.

SCARLET POPPY.

THE SCARLET POPPY.

Papaver Rhœas. Nat. Ord., Papaveraceæ.

EVERY one of our readers has doubtless had his attention attracted by this plant, the brilliancy of its colouring and the profusion with which it grows being features that enforce notice even from the most superficial observers. It is the most intensely brilliant of all our wild plants, for though the marsh marigold flower, for instance, is a perfectly pure and brilliant yellow; the white campion, a white of spotless purity; and the borage as deep and unsullied a blue as could possibly be met with or imagined—these colours, beautiful as they are, must yield in brilliant strength and intensity to the scarlet of the poppy. It has been often asserted that in the midst of the immense variety of colouring met with amongst our British plants we have only two that bear scarlet flowers—the poppy and the pimpernel—but we should certainly ourselves be inclined to

still further reduce this very limited number, and give the poppy proud pre-eminence, as there is a paleness, a refined delicacy of tint, in the red of the pimpernel blossom that will certainly not permit it to cope with the splendid depth of the scarlet of the poppy petals, though it has a beauty of its own that need fear nothing in the ordeal of comparison.

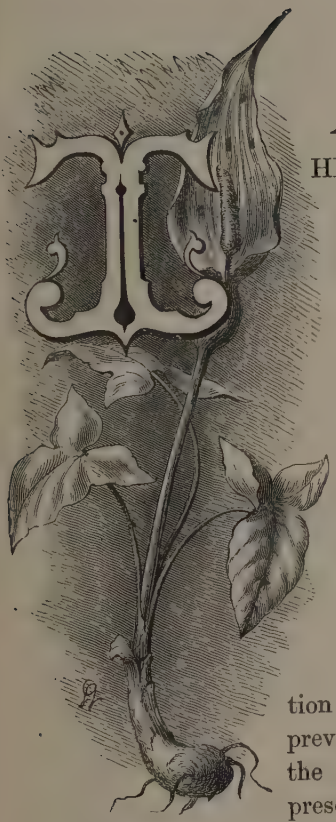
The species figured in the plate is the *Papaver Rhœas*. It will ordinarily be found fully in flower by the beginning of June; during that month and the next it will be met with in abundance, and isolated specimens may be found pretty freely all through the summer and autumn. It is more especially a plant of the corn-fields, and with the brilliant yellow of the corn-marigold, and the deep blue of the corn-bluebottle, or corn-flower, as it is often more emphatically called, makes a grand show of colour, though one, we can readily imagine, that charms the artistic and botanical taste rather than the agricultural interest. It seems more especially a plant of cultivation, for though it may often be met with on waste ground, rubbish heaps, railway banks, and suchlike spots, it is only found in profusion on the fields of the farmer amidst his corn and peas. It is an annual, and therefore one would imagine easily eradicated by a little timely patience, and more especially as its seeds do not, like those of the dandelion or thistle, get wafted all over the country side by every passing breeze, but the enormous number of seeds produced by each plant, and the ease with which they are shattered from the capsules when ripe, are formidable obstacles in the way of getting rid of it, for if the plants are not immediately destroyed at the first appearance of a blossom, any after-attack on them is almost useless.

The poppy grows some two feet or so in height, the stems are firm and erect, covered with stiff, bristle-like hairs, and a good deal branched. The lower leaves are of considerable size, very graceful in form and curve, and borne on long stalks; the upper leaves are sessile, *i.e.*, springing direct from the main stems, stalkless. The flowers are rich scarlet, each petal at its base having ordinarily a darker purple spot or blotch that is only visible when the position of the flower is such that the eye looks directly into it. The flower has four petals, but, unlike most plants, appears to have no calyx, a feature that proves rather puzzling to the novice. If, however, the opening bud be noticed, the green calyx is evident enough; the sepals fall away as the flower expands and their protective agency is no longer required. The stamens are very numerous, and form a large dark ring round the stigma, the central organ. The stigma crowning the globose mass of the style is beautifully rayed in form, and forms the very conspicuous wheel-like object in the centre of the flower. The capsule or fruit which succeeds the blossom is globular in form, and still preserves at its summit the stigmatic rays. The numerous seeds within the capsule escape, when it is shaken at all strongly, by the ring of small openings beneath the stigma.

Attempts have been made to utilise the brilliant red of the petals as a dye, but the colour, as is so often the case in vegetable products, has proved too fugitive to be of any value. In medicine, however, the petals have long been employed to give a colouring matter. The syrup produced is very slightly narcotic in effect; its real service is to render agreeable to the eye any potion that would otherwise awaken a prejudice against it on the score of

appearances; and as taste and smell are often quite sufficiently objectionable, especially to children, the addition of a few drops of *Syrupus Rhœados* to the prescription may be considered not merely legitimate, but a real kindness. It was in the Middle Ages supposed to be a remedy for pleurisy, ague, and many other ailments. As some of our readers may possibly recall to their memories the fact that the opium of the medicine-chest is prepared from poppies, we may, in conclusion, say that the drug is not afforded by the present species. The opium poppy is the native of a sunnier clime, though it is from time to time found in a state of cultivation in our English gardens. The narcotic principle is found more or less in all the species of poppy, the plants are therefore at times introduced both in art and literature with a certain symbolism of meaning, from this property of shedding a drowsy somnolency on those who come beneath their influence.

ARUM, OR CUCKOO-PINT.



THE ARUM
OR CUCKOO-PINT.

Arum maculatum. *Nat. Ord., Araceæ.*

THE subject of the present plate, though by no means so rich in colour as many of our wild plants, has a quaint attractiveness of its own; and though deficient in many of the charms of its more favoured fellows, is so distinct and different in form from most other plants that few would pass it by unheeded.

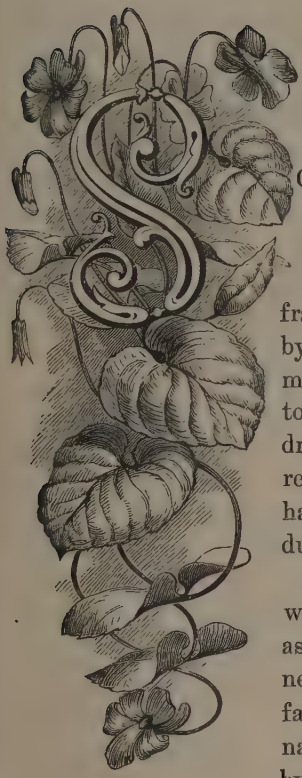
The large hood-like part of the bloom is botanically termed a spathe or spatha, from the Latin word *spatha*, a spatula or battledore, in evident allusion to the form. The necessary limitation of space has, in a few cases, prevented our doing full justice to the plants represented, and in the present case but a small specimen of the plant could be, on this account, figured. The spathe is often nine or ten inches long, tapering to a point at its upper extremity, opening out lower down so as to show the club-like form within, and then contracting

again. The central form or spadix is very curious in construction and quaint in form, and will well repay attentive investigation. On stripping off the outer envelope it will be seen that the purple club-like form is but the termination of a very unusual form of inflorescence. At the base of this central succulent axis we find a ring of fertile pistilliferous flowers, and above these another ring, some two or three rows, of aborted or rudimentary organs of like nature. Surmounting these, after a brief intervening space, we find a group or cluster of well-developed stameniferous forms, and above these, as in the case of the female flowers, another ring or cluster composed of stamens in a rudimentary and imperfect state. Though the various parts are arranged normally in the manner that we have just pointed out, the barren and fertile rings may at times be found intermingled to some extent, and if some twenty or so of these plants be examined during their period of inflorescence several departures, more or less marked, from the typical arrangement will be encountered. Our illustration represents the appearance of the plant as its leaves and flowers nestle amongst the thick undergrowth of the copse or hedgerow in the earlier part of the year. It will ordinarily be found in blossom by about the middle of April, and may be met with until almost the end of May. The autumnal aspect of the plant is very different. We look in vain for any signs of blossom, in vain even for its foliage; these have all withered and passed away, and in their place we see a little green stem, some three or four inches high, surmounted by a cluster of large succulent-looking berries of a brilliant scarlet colour, a dozen or more of them, each as large as a ripe black currant, and forming

a far more conspicuous object in the midst of the fast thinning hedgerow than the blossoms afforded months beforehand, when everything was bursting into verdure and life. The leaves are on long footstalks that spring directly from the root: they form an excellent illustration of what is in botanical nomenclature called the sagittate form of leaf, a term derived from the resemblance of the form to that of the head of an arrow. The form may be seen again in the sorrel and several other plants, but the most striking and typical example is that afforded by the foliage of the plant that is on this account called the arrowhead. The foliage of the arum is often irregularly blotched with spots of various sizes and of a dull purple, or more rarely yellowish-white, the general ground colour of the leaves being a dark green. In some plants the purple blotches are of so deep a shade as to be almost black, while in others these markings are altogether absent. The blotched foliage is, however, at once more striking and more characteristic. The scientific name of the plant is the *Arum maculatum*, the specific name being derived from the Latin word for spotted. The generic name is derived from the Greek equivalent, a word that itself was in turn derived from *ar* or *aur*, signifying fire in ancient Hebrew and Egyptian, and refers to the fiery or acrid taste of the plants comprising the genus—a genus which in England contains only the species under consideration. The rootstock or rhizome contains a large quantity of farinaceous matter, in its raw state exceedingly burning and acrid, but when properly prepared and dried by the application of heat, harmless and nutritious—an excellent substitute for corn-flour. The powder thus obtained was at one time an

article of sale under the name of Portland sago: it entered largely into the manufacture of hair-powder. It was also employed as a starch in the preparation of the elaborate ruffles affected by our ancestors—hence the plant is in some old books called starchwort. The cuckoo-pint was formerly largely employed as a remedial agent, but this use or misuse is now altogether a thing of the past, its effect being much too violent and uncertain to render its administration at all advisable. A drachm weight of the plant, either in its green state or dried, was at one time held to be a specific for the plague, and its leaves were applied externally to wounds, a proceeding we should imagine of great danger, and a pointed illustration of the remark one hears from time to time of the remedy in some given case being worse than the disease. Another favourite mediæval prescription equally dangerous was the use of the water in which arum roots had been boiled as an application to the eyes when the sight is dim, or when, as one old writer delicately puts it, "by some chance they become black and blue."

SWEET VIOLET.



THE SWEET VIOLET.

Viola odorata. Nat. Ord., Violaceæ.

SCARCELY any wild flower is so well known or such a general favourite as the sweet violet, the *Viola odorata* of the botanist. Its fragrance betrays it to the rambler by the country hedge-side, and has made it no less attractive to the townsman, for whose benefit hundreds of thousands of its flowers are regularly cultivated, the sale of which has become a recognised street industry.

The generic title has been by some writers assigned a Celtic origin, but as the plant is in Latin *Viola*, we need hardly, perhaps, look much farther afield for a derivation. The name was first bestowed on the genus by the great Linnæus, and as by far the greater number of the names he assigned to various plants are either Latin or Greek in their origin, we may reasonably assume that in the present case he more probably went to a classic than a Celtic source. *Odorata*, the specific name, also Latin, we need scarcely

point out, means odorous. Many plant-names thus owe their origin to some peculiarity that it is desired to emphasise in the mind when naming the plant, not only the fragrance of the blossom, but also its colour or that of the fruit, the texture of the leaf, the general growth, and many other structural features being introduced; of these the upright St. John's wort, shrubby cinquefoil, red-berried bryony, rough-fruited bedstraw, alternate-leaved saxifrage, tuberous carraway, perfoliate honeysuckle, and curled dock are a few examples out of many. The same influence has largely affected the scientific names, thus we meet with *pedunculata*, stalked; *acre*, bitter; *mollis*, soft; *acutus*, sharply pointed, and a great variety of other titles of the same character.

The sweet violet has a perennial root-stock, and from this runners are generally freely given off; it is not, therefore, a difficult plant to cultivate, though care must be taken to approximate the conditions of growth to those that are natural to the plant. In a state of nature it will always be found to be a lover of the shade, growing either amidst the long grass and herbage of the hedge-bank, and shielded by them, or in woods or other spots where some little shelter is obtainable, and it would on this account escape the cursory glance, its fragrant odour, however, often revealing its whereabouts. The leaves are given off at intervals along the creeping stems, and form a good example of what is botanically termed a cordate, or heart-shaped leaf. The leaves are often considerably larger than the space at our disposal will allow us to represent in our illustration. The flowers are generally of a deep purple colour, though sometimes they are of a pale reddish purple, and often pure white; all, irrespective of colour, are equally

fragrant. The deep purple flowers give their name to the colour, violet, that is called after them, in the same way that people speak of pea-green or canary, terms equally suggested by the tints of natural objects. The violet flowers in the early spring, about the third week of February being the earliest date at which it will be met with, while by the end of April the time of blossoming will have expired. Our dates refer exclusively to the plant in a wild state; if dealing with the plant under the influence of cultivation these dates would require considerable modification. The flowers, it will be noticed in our illustration, are spurred. The sepals, the parts composing the calyx, are very obtuse in form.

The hairy violet (*V. hirta*) bears a very considerable resemblance to the species we have illustrated. The main points of difference are as follows:—In the hairy violet the flowers are almost or quite scentless; it but rarely throws out the trailing shoots that are so characteristic a feature in the sweet violet; the hairs on the stem are in the sweet violet deflexed, while in the hairy violet they are spreading, and are thus more conspicuous, sufficiently so to give the familiar name to the plant; and, in conclusion, the little scales called bracts, that in our drawing are seen on the flower-stems, are in the sweet violet ordinarily above the middle of the stalk, while in the hairy violet they are ordinarily (in neither case invariably) below this point.

The marsh violet (*V. palustris*), the dog violet (*V. canina*), and the heartsease or pansy (*V. tricolor*) are other well-defined species of indigenous violets. The sweet violet is one of the favourite flowers of the poets, and many pleasing passages might easily be collected did space permit.

The *V. odorata* is still found in the pharmacopœia, though many of the virtues ascribed to it in the Middle Ages have not stood the test of time and greater experience. The expressed juice and the syrup are slightly laxative, and are often prescribed for young children. The flowers may also be used as a test, since they turn red with acids, while alkalis change them into green. The roots appear to possess somewhat violent and uncertain medicinal qualities; they have occasionally been used as adulterants of more costly drugs. A mere catalogue of the uses of the violet in the Middle Ages, and of the diseases it was a remedy for, would take up far more room than the subject is worth—inflammation of the eyes, sleeplessness, quinsy, pleurisy, jaundice, are but a few of the ailments for which it was held potent.

PRIMROSE.

THE PRIMROSE.

Primula vulgaris. *Nat. Ord., Primulaceæ.*

FEW, if any, of our wild plants are more generally known, or more widely appreciated, than the beautiful flower figured on the present plate. The graceful form of the widely-expanded blossoms, the delicacy of their colour and fragrance, their profusion, and the time of the year at which they are found, are all features that tend to endear them to all lovers of plants. The colour is a very unusual one; the only blossom that we can call to remembrance as we write that at all closely resembles it is one of the beautiful plants of the rivers of tropical America, the *Lymnocharis Humboldtii*, which, though very different in form, has the same delicate sulphur tint over the greater part of each petal, and the same rich spot of deep, clear yellow at its base, that we see and admire in the primrose. The *L. Humboldtii* appears to be a by no means troublesome plant to cultivate, and our readers will find no

difficulty in meeting with it at Kew or Sydenham. It is very curious that this same combination of colour may also be found in a very common but very beautiful butterfly that, like the primrose, hails the warm days of spring. The lover of natural beauty will scarcely have failed to notice and appreciate this insect, the *Gonepteryx rhamni*, or brimstone butterfly, of the entomologist, its size, the graceful curves of the outlines of the wings, and its appearance at so early a period, all rendering it a conspicuous addition to the beauties of the wakening year. The entire surface of the wings when displayed reveals the same delicate sulphur-yellow of the primrose, except that in the centre of each wing we find a spot of deeper yellow. As possibly some entomological novice may capture an insect that, while appearing to be the one in question, by no means bears out the encomiums we have pronounced on the beauty of its colouring, we may just mention that it is the male insect that has the ground colour of the wings pure sulphur in tint; in the female the wings are of a dull greenish white.

The outer edge of each of the wings, both in the male and female, has a conspicuous projecting point or angle, a feature that no other British insect possesses to anything like the same extent, a feature, therefore, that will at once identify it—a feature, too, that gives it its first or generic name. *Gonepteryx* signifies angle-winged, while the specific name points out that the larva, or caterpillar, of this beautiful insect feeds on the *rhamnus*, or buckthorn.

The primrose is the *Primula vulgaris* of botanical nomenclature. The generic name is derived from the Lat. *primus*, first, in reference to the early appearance of

this, the commonest, species in the genus, while this frequency of occurrence is itself in turn dwelt on in the specific name *vulgaris*. The English name primrose conveys a reference again to the earliness of its appearance; it is in France the *primevère*. The flower is a great favourite of the poets—Shakespeare, Milton, Cowper, Burns, Goldsmith, Beaumont and Fletcher, all speak of it.

When found at all the primrose will ordinarily be met with in profusion: woods, hedgebanks, railway embankments, and pastures are its favourite spots; and there are few more beautiful or characteristically rural sights than a long stretching hedgerow or coppice starred over with thousands of these delicate blossoms. April and May are the best months to go in quest of it, though in sheltered situations it may in mild winters be found in blossom even during the opening days of the year.

The plant must be so well known to all our readers that little verbal description of it appears necessary. Great numbers of the roots are transported each spring into London and other large towns, and in many a back street and squalid alley the pot of primroses is a link between the present and the past, and recalls many an association anent the bygone days to those whose lot now confines them to very different surroundings.

In some parts of the country, more especially in South Wales, a variety having pink blossoms is common, but never so common in any locality as to supplant the better-known colour, and though in some localities hundreds of plants of the pink variety may be met with, the typical species will always be found to be still more abundant.

The roots of the primrose are emetic in medicinal

effect. Though, like many other indigenous species, the present plant has fallen into disuse, it was largely used in many ways at one time. We have seen it stated that the leaves of the primrose are eagerly eaten by the common silkworm, but we have not submitted the matter to actual test. Should such be the case the fact would have a certain value, as the leaves of the primrose would at some times and in some localities be much more easily accessible than those of the mulberry, the food ordinarily sought after.

The cowslip is an allied species, but as that forms the subject of another plate in our series, we refer our readers to that for remarks that naturally arise in mentioning the other familiar plants of the same genus, such as the cowslip, the oxlip, and the bird's-eye primrose.

HYACINTH.

THE HYACINTH.

Agraphis nutans. Nat. Ord., Liliaceæ.

THE present plant, though as characteristic a spring flower as the snowdrop, the primrose, or any other of the well-known and welcome harbingers of the coming floral year, differs widely from them in one respect, that, if not of botanical significance, is sufficiently marked to be very noticeable by any careful observer—we refer to its colour. Various theories, more or less satisfactory, have been raised to account for the fact, though into these we cannot here go, that almost all our spring flowers are, as compared with the flowers of summer and autumn, very pale in colour, white and yellow being the prevailing tints. The stitchwort, the arum or cuckoo-pint, a plant figured on a preceding plate, the primrose, the hawthorn, and the lady's-smock are but a few examples that will be noticed in our illustrations, though sufficient possibly to bring out the point in question. The flowers of the summer incline to

richer tints—the rich scarlet of the poppy, the deep blue of the borage, or the purple of the meadow cranesbill being fairly typical examples. As these three species have already appeared in our work, the reader may readily turn to them in confirmation of our statement. We need scarcely, however, stay to point out that, as in most other cases, there are marked exceptions to any such generalisation, the deep purple of the present plant, the very similar hue of the periwinkle, or the pure deep blue of the germander speedwell being a wide departure from the prevalent lightness of colour in spring blossoms; and we might in the same way point out several flowers of the summer and autumn that are to the full as light and delicate as their sisters of the spring. Many such will be found scattered amongst our illustrations, so that it hardly seems worth while to linger in particularising them more distinctly.

All blue or purple flowers are liable to change of colour, sometimes being found of a pure white, at others a reddish tint—the milkwort, the sweet violet, the bugle, and the present plant afford easily accessible examples of this, while the germander speedwell only varies to white, never to any shade of red. No flower normally blue ever changes to any tint of yellow.

The wild hyacinth is sometimes called the blue-bell. It is a somewhat unfortunate name, however, as the harebell is also occasionally known as the blue-bell, and there are several other blue and more or less bell-like flowers, as, for example, the gentians. The present plant is known botanically as the *Agraphis nutans*, though by the older writers it was called the *Hyacinthus non-scriptus*, and in some modern works it is the *Scilla nutans* or the

Endymion nutans. The specific name *nutans* simply means nodding; but it will be seen that very considerable difficulty has been felt in determining the genus, various writers, according as they dwelt on one or other point of structure, classifying it differently. Linnæus first called it *Hyacinthus,* and the specific name means not written on, a name inexplicable without some key. The genus was named—after a certain classical bias of those days—after the youth Hyacinthus, who, being killed by Apollo, was by him changed into an allied plant, whose leaves bore in dark streaks the letters of his name; and as this particular species of the genus has no markings on its foliage, it was, for the sake of distinction, called the *non-scriptus,* or unwritten on. The generic name *agraphis* is of similar significance, being compounded of two Greek words, meaning not to mark. *Scilla* is derived from the Greek word to injure, but we confess we are unable to see any especial appropriateness, etymologically or botanically, in calling our plant either *Scilla* or *Endymion.* It is the "fair-hair'd hyacinth" of Ben Jonson, a name bearing allusion to the myth already referred to. The hyacinth has very long leaves, of a type known botanically as linear; these all rise from the bulb, and from the midst of these and over-topping them rises the stem that bears the flowers. These blossoms are arranged in a long and curving line, and vary considerably in number in various specimens; each has two small bracts at the base of the pedicel, or short stem that unites it with the main stem. The flower is a perianth, a term applied when the parts of the calyx and the corolla are so similar in form and colour that little or no difference is perceptible.

The hyacinth is a plant of the woods and shady

hedgerows, and when found at all is found in such abundance ordinarily as to appear like a carpeting of blue beneath the trees, which, softening off into a beautiful purple in the distance, as it does, until all detail is lost, and nothing remains but a hazy mass of rich colour, has a peculiarly charming effect, and one that once seen and enjoyed will not readily be forgotten. The rich odour will often reveal their proximity before the woodland dell they delight in is reached. The hyacinth is in flower from about the first week of April until the first week of June, and being a perennial may be looked for in its favourite localities year after year.

DANDELION.

THE DANDELION.

Taraxacum dens-leonis. Nat. Ord., Compositæ.

LIKE the buttercup or the daisy, the dandelion has been so well known to us all since the earliest childhood that we feel almost induced to follow on the track that is so temptingly laid down by the writer of an old botanical book in our possession wherein he says, "it is vain to describe an herb so well known." This style of treatment is a somewhat favourite one with our old author. Under the heading dock, we find that "many kinds of these are so well known that I shall not trouble you with a description of them. My book grows big too fast;" while of the woodbine he says, "It is a plant so common that every one who hath eyes knows it, and he that hath none cannot read a description if I should write it." Tempting as this mode of treatment may appear when writing on our common wild plants, we must nevertheless

endeavour to see if we cannot, without too evident a reiteration of well-worn facts, throw a little more light than this on various points connected with the subjects of our plates as they pass before us.

The dandelion is by some botanical writers called the *Leontodon taraxacum*, by others the *Taraxacum dens-leonis*. The allusion to the lion's tooth is very palpable in all these names, dandelion being but a corruption or modification of the French *dent-de-lion*, while *leontodon* means precisely the same thing in the Greek and *dens-leonis* in the Latin. Why the plant should thus be associated with the lion's tooth has been the subject of several theories. One writer suggests that the name arises from the whiteness of the root when cut, but this is hardly probable, as the popular names of plants more ordinarily arise from some feature in their growth, or some resemblance presented, that appeals more directly to the eye than a peculiarity which can only be noticed on the uprooting of the plant. The leaves or the flowers will more probably supply the clue to the origin of the name, and it is therefore not surprising to find that we have two other theories to account for the origin of the name dandelion—one being based on the form of the leaves of the plant, and the other on the shape of the blossoms. It will be noticed that each part or ray of the flower-head is long and strap-shaped, and that the end is notched or toothed, the feature that, according to some writers, has earned it its popular name, the golden colour being in this case regarded as a further proof of the correctness of the idea, since though the tooth of the real lion is white, his heraldic presentment may have golden teeth; even where thus represented, however, the feature is somewhat insignificant, and the surmise, in

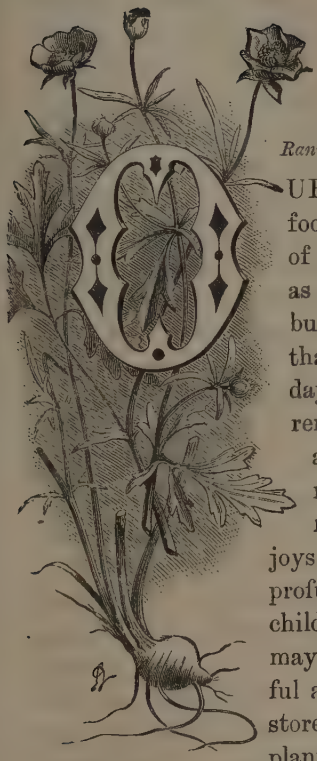
addition, clashes with one of the established rules of blazonry—that lions, whatever their tincture, except it be red, or they are charged on a field of that tincture, are armed and langued gules, but azure in the case of either of these exceptions, unless the contrary be specified in the blazon. The teeth of the lion of heraldry are, therefore, ordinarily red or blue in colour, not golden. The jagged form of the outline of the leaf furnishes a third explanation of the popular name, the pointed lobes being really very suggestive of the pointed form of the four more conspicuous teeth, two in either jaw, of the lion; and this surmise appears to meet, amongst botanical students and writers, with most general acceptance.

The leaves of the dandelion are subject to a very considerable variation of form, in some cases being deeply cut into segments, while in others the segments or lobes form a much less conspicuous feature. These lateral lobes, it will be noticed, ordinarily point downwards in their general direction, unlike such features in the majority of plants where they will be found to point towards the apex of the leaf. The simpler form of leaf above referred to is one of the characteristic features that has led many botanists to admit a sub-species—the marsh dandelion, or *T. palustre*.

The plant may be found in flower almost throughout the year, though its golden heads of blossom are more especially conspicuous in the earlier months of summer. It is a perennial, and the long, tapering root-stock penetrates so deeply that it is a difficult plant to dislodge, while each wind sends the seeds flying over the country side. In our illustration the greater number of the seeds have been thus scattered. Before the seeds are fully ripe and ready for dispersal the head is globular, and from its

silky whiteness forms a noticeable feature. Each head of flowers and each leaf springs directly from the root. The plant is full of a bitter and milky juice, which, when it comes in contact with the hand, turns to a brown stain that is rather difficult of removal. The young leaves when blanched lose much of their bitterness, and are not altogether unlike endive in flavour, and two or three young leaves, even in the green state, form a pleasant addition to a salad. The roots are sometimes roasted, and employed as a substitute for coffee, though from their somewhat powerful medicinal qualities some little care is requisite in their use.

BULBOUS CROWFOOT.



THE BULBOUS CROWFOOT.

Ranunculus bulbosus. *Nat. Ord., Ranunculaceæ.*

OUR present subject, the bulbous crowfoot, is one of the numerous family of buttercups, and may be considered as the most typical specimen, the buttercup *par excellence*, the flower that is linked with the daisy in the days of rural childhood, and that remains, to all those who have ever as children enjoyed the delight of rambling in the long grass of the meadows, a memorial of those early joys. The farmer, however, regards the profusion that is golden wealth to the child, the inexhaustible treasure that may be gathered by handful after handful and yet suffer no diminution of the store, with no friendly eyes, since the plant has not only no economic value, but is absolutely injurious, in so far as it takes the place of more useful herbage. Cattle and horses, it will be noticed by any one who will take the trouble to watch their proceedings, are careful to avoid the buttercups, their burning and acrid nature being evidently by no means to their taste. As the meadows in June are often one sheet of brilliant

yellow from the abundance of these flowers, it is evident that a very considerable deterioration of the pasturage must for the time being ensue. The botanical name of the present species is *Ranunculus bulbosus*. The generic name applied to these plants is derived from the Latin word for a frog—*rana*, and refers to the favourite habitat of most of the species—damp low-lying meadows, water-courses, the edges of streams, or, in one case, the *R. aquatilis*, the actual mid-stream itself, localities where these plants flourish and frogs abound. The idea seems perhaps a little far-fetched, but it is altogether too late now to raise such objection, as the term has been employed since the time of Pliny, who seems to have first used it, and has consequently received the sanction of ages. The specific name *bulbosus* refers to the bulb-like swelling at the base of the stem; it is, however, only bulb-like, it is not a true bulb.

In France the plant is the *jaunet*, a name that the brilliancy of the colour of the blossom, either taken individually or seen in the mass, renders very expressive. From the commonness of the plant almost everywhere (though in the North of Scotland it is unknown) it has received a great number of local names, of these perhaps frogs-foot and gold-cup are most expressive, frogs-foot having reference to the form of the leaves, while gold-cup is sufficiently expressive of the form and colour of the blossom. In botanical works this species is often called crow-foot, from a fancied resemblance to the foot of a bird in the form of the foliage. It is very curious to notice how largely these fancied resemblances have been suggestive in botanical nomenclature. As examples of the more obvious names we may instance the arrow-head, the

name being derived from the form of the leaf, and so marked is this resemblance that the generic and specific names also enforce it, the Latin word for an arrow being *sagitta*, and the botanical name of the plant *Sagitturia sagittifolia;* the five fingers, as the cinquefoil from its spreading leaflets, was at one time called; the adder's-tongue, ox-tongue, lamb's-tongue, pheasant's-eye, ox-eye, cat's-tail, horse-tail, colt's-foot, bird's-foot, goose-foot, lark's-spur, stork's-bill, mouse-ear, hare's-ear, shepherd's-purse, skull-cap, Turk's-cap, monk's-hood, maiden-hair, rattle, snow-flake, snapdragon, and many other examples might also be cited. Amongst specific names we may meet with the following: *serrata, dentifera, filiformis, lanceolatum, cordatus, peltatus, flabellifolia, apifera, ensifolia, reticulata*—saws, teeth, threads, lance-heads, hearts, shields, fans, bees, swords, and network being respectively called upon to furnish a comparison or bestow a name. In the same way we find amongst generic names such words as the following: *campanula*, signifying a little bell; *stellaria*, like a star; *lycopsis*, from two Greek words signifying wolf-face; *delphinium*, Lat. *delphinus*, a dolphin, on account of the shape of the upper petal of the flower; *lomaria*, from *loma*, a fringe. The bulbous crowfoot bears some slight resemblance to two of its congeners, the upright crowfoot and the creeping crowfoot, but the resemblance is only superficial, the botanical characters that mark the differences being really very distinct; a clear feature for popular use will be found in the sepals, the parts that form the green calyx that holds the cup of the flower. In the present species the sepals are so far reflexed that they almost or quite touch the stem that supports the blossom, while in the other two species this is

not the case. This feature is only noticeable in the fully expanded flower. In our illustration it will be observed that the parts of the calyx wrap the bud round in the ordinary way, and it is only on the expansion of the blossom that the sepals are thrown back.

The buttercup may be considered one of the typical flowers of the early summer. It will ordinarily be found in flower by about the end of the first week in April, and lasting through May and June and the first half or so of July. It is a perennial, and therefore when once established not easily got rid of again. The cup form of the blossom that gives it one of its common names, buttercup, is in this species particularly clearly defined. In the goldilocks, for example, the water buttercup, or the celandine, allied plants, this regularity of form is by no means so clearly seen, though all three are popularly called buttercups. The stems of the bulbous crowfoot are furrowed slightly, while in several of the other species they are merely cylindrical. There is a great variety of form in the foliage: the upper leaves, it will be noticed, have a much greater simplicity of outline than the lower, the segments of which the leaves are composed being in one case very long and narrow, while in the other they are broadened out into very distinct masses. Most of the lower leaves are far larger and richer in outline than the limited space at our disposal allows us to depict.

COMMON ORCHIS AND BROAD-LEAVED GARLIC.

THE COMMON ORCHIS

(*Orchis mascula. Nat. Ord., Orchidaceæ*)

AND

BROAD-LEAVED GARLIC.

(*Allium ursinum. Nat. Ord., Liliaceæ*).

THE common or early purple orchis, one of the subjects figured on the present plate, may not uncommonly be met with in most parts of England in meadows, pasture-land, and the wide expanses of open down-land that in some districts form so marked a feature in the scenery, though, like many other members of the order, it seems to prefer some geological conditions of soil more than others. In meadow-land the plant often attains a height of a foot or more, while on the exposed and breezy downs it is rarely to be found above half as high. The flowers are ordinarily of a rich purple colour, though at times they may be found of almost every gradation between this normal state and pure white. The plant may be found in flower from about the middle of April to the middle of June, a single flower-stalk being thrown up from each plant. The leaves are of a lanceolate form, and rarely rise far from the ground, the general effect, therefore, of the

foliage when one comes upon a plant during a ramble over the hills is that of a rosette of leaves surrounding the stem bearing the flowers. The leaves are ordinarily irregularly spotted and blotched with markings of a dark purple colour, a feature that renders the plant more conspicuous and attractive when out of flower than would otherwise be the case. The root-stock develops each year a fleshy tubercle for the supply of the nutriment needed for the next season's growth; hence, ordinarily, in digging up the plant two of these will be found. "These alter every year by course, when the one riseth and waxeth full, the other waxeth lank and perisheth: now it is that which is full which is to be used in medicines, the other being either of no use, or else, according to the humours of some, it destroys and disannuls the virtue of the other, quite undoing what that doth." These tuberous root-like bodies abound in a starchy matter, which is of great value, being extremely nutritious, and under the name of salep has been, at one time or another, largely employed as a strengthening agent. It forms a diet of especial value to convalescents and children, being boiled with milk or water, flavoured and prepared in the same way that sago or other farinaceous food would be. The finest salep is brought from Persia, though the present species, *O. mascula*, and its congeners, *O. morio* and *O. militaris*, all British plants, yield a quality, under careful preparation, that is almost equal to that of the East. Should any of our readers care to manufacture a little for the sake of the experiment, and to test its nutritious qualities, the following process is necessary:—The roots of the orchis must be dug up when the plant has done flowering and has formed its seed, the new or next year's tubercle being then at its full

maturity. The new tubercles being separated from the old and decaying ones, must be cleansed and peeled, then laid on a tin plate and placed in an oven for some ten minutes, at about the ordinary temperature for bread-making. On removing them they will be found to have changed from their milky-white appearance to an almost transparent and horny state, though without suffering any diminution in bulk. They must then be removed into the fresh air to dry and harden, a process that will take some few days, and on its completion they are at once either ready for use or to be stored away for as long a time as circumstances may call for, as humidity or mould do not seem to affect them when once thoroughly prepared.

One curious feature in the orchis does not appear ever to have been satisfactorily explained—we refer to the great difference perceptible, sometimes only too painfully, in the scent of the blossoms. In some specimens the odour is scarcely noticeable, in others the flowers might fairly be called fragrant, while in some again the smell is both strong and offensive, and utterly banishes them from the place in the spring nosegay that their heads of brilliant blossoms might otherwise fully claim.

The various species of orchis which adorn our pastures will almost all repay the inspection that their curious and irregular looking flowers, so quaintly different from the ordinary idea of a flower, invite one to give them. One, the lizard orchis, the *Orchis hircina* of scientific nomenclature, has a blossom that presents much the appearance of the animal from which it takes its familiar name, while the dull greenish-white of its colour still further aids the resemblance. Another, the man-orchis, *Aceras anthropophora*, simulates the human form not inaptly, the lower

portion of the flower having a body and two lateral pieces that do very well for arms, and a forked termination that does duty for the legs. The general effect of the head of flowers is very quaint, much like a series of little yellowish-green dolls. The bee orchis, the *Ophrys apifera* of science, the spider orchis, or *Ophrys aranifera*, and the fly orchis, the *Ophrys muscifera*, are other interesting species, deriving their common name from the likeness of the blossoms to the various animal forms whose names they respectively bear.

The broad-leaved garlic, the second plant on our plate, and the *Allium ursinum* of systematic botany, is perhaps one of the most graceful of all our spring flowers, its leaves elegant in shape, and of a delicate green, and its umbels of pure white star-like flowers being conspicuously beautiful, though the strong onion-like odour that it gives out when gathered often leads to its being very summarily dismissed from the nosegay. Though generally distributed throughout the country, it is not everywhere common; shady hedge-rows and moist woods are its favourite spots. It is a flower of the spring and early summer, and is often unconsciously the cause of much disappointment, as before the flowers appear the general appearance of the plant is not unlike that of the lily of the valley, and we have two or three times known its blossoms anxiously watched for, and its beauties very scornfully treated when they were not those of the May-lily.

YELLOW IRIS.

THE YELLOW IRIS.

Iris pseudacorus. Nat. Ord., Iridaceæ.

MONG the many beautiful flowers that fringe our rivers, or rest upon their surface, the yellow iris, the plant figured in the present plate, is one of the most beautiful and conspicuous, being perhaps only less striking than the water-lilies, to which the pre-eminence over all their lovely rivals must surely be accorded. The plant is known botanically as the *Iris pseudacorus*. Provincially it is often called "segg," a corruption of the word sedge, and both derived from the Anglo-Saxon word *segg*, a small sword, the name being employed in obvious allusion to the long sword-shaped leaves that rise so boldly from the water. It is also called the fleur-de-lys and the yellow flag, the outer segments of the perianth fluttering in the breeze in a degree that suggested to some early writers the waving of a flag. The resemblance of the blossom to the heraldic fleur-de-lys is too far-fetched to make the name at all appropriate, the device in blazonry being, in fact, so arbi-

trary and conventional in character that some half-dozen objects of the most diverse character have been selected by various theorists as being the probable types, natural or otherwise, on which the form was based. The generic name of the plant is derived from the Greek word for rainbow, on account of the rich and varied tints of the numerous species included in the genus, while the specific name, *pseudacorus*, points out that it bears a certain resemblance to another plant, *pseudes* being the Greek word for false, while *acorus* is the generic name of the sweet sedge. The leaves of each of these plants are of very similar form, size, and general character, but the foliage constitutes the only real point of resemblance. The sweet sedge is, moreover, much more rarely met with, and has a rich and aromatic scent that would at any time suffice to make a real confusion of the two plants impossible.

The yellow iris ordinarily comes into blossom in the latter half of May, rarely lasting in flower beyond the beginning of July. The root-stock is large and runs horizontally, throwing off numerous stems and leaves, and is so astringent that it has been employed as a medicinal agent, though it is not now included in our pharmacopœia. It may also be used in the place of galls in the making of ink, and yields, with sulphate of iron, a good black dye. Before drying the acidity of the taste is so great that it can scarcely be employed at all in medicine, but this property is lost on drying the roots thoroughly, though the strongly astringent qualities remain. The root-stocks of the *Iris Florentina*, a kindred species, yield the iris (or as it is more commonly called, orris) root used in perfumery. It is collected chiefly in the neighbourhood of Florence and Leghorn. The flowers rise,

as may be clearly seen in our plate, from a large sheathing bract, or floral leaf, and are divided into nine conspicuous portions—viz., the three outer segments of the perianth, which, from their size and reflex growth, form the most noticeable feature; then, alternating with these, the three much smaller and upright-growing inner segments; while over the three larger portions of the perianth we find a third series of forms, the three petaloid stigmas covering the stamens. The construction of the blossom is altogether very interesting, and will well repay careful investigation and dissection into its component parts. The same general idea, if we may use the expression, runs through the building up of the flowers of the various species of garden iris—the *Iris Persica*, with its delicious scent; the snake's-head iris (*I. tuberosa*), the Chalcedonian iris (*I. Susiana*), and many other equally well-known and esteemed species, though various modifications of size and form will be found, in some flowers one ring of parts being more especially striking and conspicuous, in others another. Though the yellow iris in a wild state is always found either rising from the bed of the shallow stream, or amongst the vegetation that fringes its banks, such close contact with the water does not seem absolutely needful, judging by the healthy vigour of a plant in our own garden, that is flourishing many yards from the banks of the Kennet, and seems in all respects as much at home as those that in rich profusion blossom by the side of the stream. If the plant could bear a still further removal from the neighbourhood of the water, and thrive equally well in an ordinary flower-border, it would form a very desirable acquisition, and would be fully entitled to rank in esteem with the lily of the valley, the wallflower, and the fox-

glove, plants that, though really wild, are so frequently met with in cultivation. After the decay of the flowers the seed capsules take their place, and are sufficiently large, being some three inches long and fully an inch in diameter, to attract attention. The numerous seeds they contain have sometimes been roasted, and a decoction made from them that is said to be not unlike coffee. The capsule is three-celled, and if cut transversely with a sharp knife, has a very pleasing form of section; and, in fact, we would recommend our readers who take any interest in the study at all to subject many other fruits to a like process. Many of the sections thus afforded are strikingly beautiful in form, those of the various umbelliferous plants, such as the hemlock, carrot, or hare's-ear, being pre-eminently so.

The fœtid iris, gladdon, or roast-beef plant, is the only other indigenous species of the genus. In this the flowers, somewhat smaller than those of the *I. pseudacorus*, are ordinarily of a bluish purple, though a variety with yellow blossoms may sometimes be met with. It is a dweller in woods and hedgerows, and though fairly common, is by no means so widely distributed as the water iris. The botanical name (*I. fœtidissima*) is sufficiently expressive of the disagreeable odour that is given out when the plant is bruised or crushed, though some have preferred to detect a resemblance to roast beef.

DEAD NETTLE (RED AND WHITE).

THE WHITE AND RED DEAD-NETTLES.

Lamium album, Lamium purpureum.
Nat. Ord., Labiatæ.

SEVERAL species of dead-nettle are indigenous, and of these we figure three, the white and red being represented on the present plate, while the third—the yellow—appears further on in our series.

These plants are all called indifferently dead-nettles, blind-nettles, or archangels, the proper prefix defining the colour of the plant being also given, that the particular species in question may be identified. The first two names point clearly to the harmless nature of the plants as contrasted with the stinging-nettle, a plant they in some degree resemble, while the third we must perforce leave unexplained at all. The old names of plants appear to have been often very arbitrarily bestowed, and any meaning that may have decided their choice is not uncommonly now lost to us. The name is somewhat high-sounding, and we can recall with great amusement the blank astonishment exhibited in the face of a friend, who, after

having his curiosity aroused by so striking a name, impatient to see so distinguished a plant, had it at last placed before him. To what seraphic height his imagination had soared we never knew, but "a flowering nettle" evidently fell far below the ideal he had conceived. The botanical name of the white dead-nettle is *Lamium album*, and that of the red-flowered species *Lamium purpureum*. These specific names are sufficiently explanatory to need no elucidation, we imagine, to any of our readers, while the generic name is derived from the Greek word signifying the throat, in allusion to the form of the blossom in these plants.

The white dead-nettle is exceedingly abundant in the hedgerows, on banks, and in waste places and rough ground, and being a perennial, does not, when it has once established itself, give up possession easily. The whole plant is somewhat coarse in appearance, and when bruised has a strong and rather disagreeable smell. The plant ordinarily grows about a foot high, but as it is generally amidst long grass and coarse herbage of one sort or another; the entire plant is rarely seen unless gathered with that intention. The leaves are given off from the stem in pairs, each pair being at right angles with the pairs immediately above and below it, and in the axils of these leaves the whorls or rings of flowers are developed, each ring being composed of from six to twelve blossoms of a delicate creamy-white. The teeth of the calyx are very long and spreading, and form a conspicuous feature, while the form of the corolla, as it rises and towers above the calyx, is very graceful and beautiful. The plant is evidently a favourite with the bees, that may be seen busily at work in the flowers in the sunshine.

The red dead-nettle is almost as abundant as the white, though being ordinarily a much smaller plant, it does not so readily attract attention. It is found in the same spots as the *Lamium album*, and is one of the earliest weeds to spring up in the neglected garden, but, being an annual, it may easily be eradicated when greater diligence has changed the waste into a pleasaunce, and the legitimate denizens of the garden claim their own again. Both these nettles flower throughout the whole year, though, like all other flowers, they are not insensible of the charms of the spring and the glorious sunshine of summer, and are at these seasons, more especially, commonly to be met with in blossom. The leaves of the red dead-nettle are somewhat broader in proportion to their length, and more heart-shaped, than those of the white nettles, and, especially near the top of the plant, are much more crowded together on the stem; the arrangement in pairs pointing in alternate directions is similar to that noted in the white dead-nettle. The upper leaves of the red nettle are sometimes densely clothed with silky hairs, and are often of a deep purplish crimson, a colour that in some cases suffuses the whole plant, foliage, stem, and blossom all alike glowing with it, and rendering it much more noticeable and striking in appearance. When the plant grows in the rank grass of the hedge-bank it is often drawn up to a very considerable length, and is then so different in appearance to the more typical forms that a novice might well be pardoned in thinking that a plant so dissimilar could scarcely be practically the same. On the open ground the plant is somewhat spreading in habit, rarely more than six inches in height, and ordinarily more or less warm and rich in colour,

while specimens gathered from the midst of crowded and rank vegetation are often more than a foot long, and, with the exception of the blossom, which is ordinarily a paler and sicklier purple than in the plant grown under more favourable circumstances, are of a dull green throughout. The main stem of both the white and red dead-nettle is found to be square in section, and hollow, if cut transversely.

Besides the yellow dead-nettle, to be hereafter described, we have the henbit, or *Lamium amplexicaule*, a very fairly common species, not altogether unlike the red dead-nettle, but somewhat lighter and more graceful in appearance, the fine, deep rose-coloured flowers having a much more slender tube, and therefore thrown further out from the mass of leaves. The spotted nettle, the *Lamium maculatum* of some botanists, who give it the rank of an independent species, is by others regarded merely as a permanent variety of the white dead-nettle, which it closely resembles, except that the flowers are pale purple instead of white, and that the foliage is often marked by a broad irregular streak of white down the centre of each leaf, generally accompanied by smaller dashes or spots on either side. This plant has but very slight claims, however, to rank as a true wildling, though it may often be met with in old-fashioned country gardens, and it is very probable that such specimens as may be met with, apparently in a wild state, are really but the outcasts of some cottager's garden,

GOLDILOCKS AND WATER RANUNCULUS

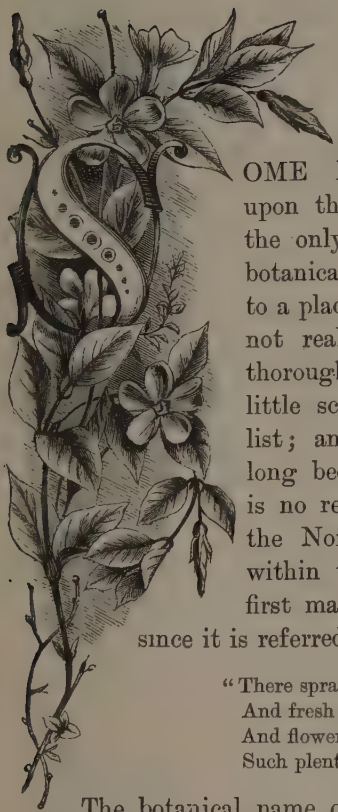
THE GOLDILOCKS AND WATER RANUNCULUS.

Ranunculus auricomus, Ranunculus aquatilis.
Nat. Ord., Ranunculaceæ.

BOTH the plants represented in the present plate, though very distinct in appearance, belong to the same botanical genus, the goldlilocks being the *Ranunculus auricomus* of science, and the water ranunculus the *Ranunculus aquatilis*. Besides the present plants, the buttercup, or bulbous crowfoot, already referred to, and the lesser celandine, which forms the subject of future illustration, we have several other indigenous species, all more or less popularly called buttercups, and all freely to be met with, though some are much more local in their range than others, and are only to be found in the special habitat of the species; thus the wood ranunculus, so called from its preference for the woodland shades, should be sought for in coppices or sheltered hedgerows; while it is evident that though the water buttercup may be common enough in a given locality, we shall search for it in vain in the woods or on the open downs or pasture land.

of the plants for low-lying damp ground. The blossoms appear about the middle of May, and ordinarily in such profusion as to make the whole surface of the river or pond one sheet of white. The water buttercup is subject to much variation, more or less permanent, and on these modifications of forms different writers have based certain specific differences; one author recognising seven species, another six, while a third limits himself to one, but admits that it has three distinct varieties. The one figured in our illustration is the species or sub-species known as *R. fluitans.* It is only found in running water; all the leaves are submerged, and deeply cut into very low and about parallel segments, while in other sub-species found in still water, besides the submerged and finely-cut leaves there are floating leaves of a form very similar to the radical leaf of the goldilocks. The various features on which some botanists found specific differences are so inconstant, and appear to depend so much upon the circumstances in which the plant is found, that the question how far the species may be split up must always remain an open one.

PERIWINKLE.



THE PERIWINKLE.

Vinca major. Nat. Ord., Apocynaceæ.

SOME little doubt has been thrown upon the claims of this plant—one of the only two British examples of the botanical order to which it belongs—to a place in our flora; but even if it be not really a native, it has become so thoroughly naturalised that we need feel little scruple in admitting it into our list; and there is no doubt that it has long been flourishing amongst us. It is no recent importation, like some of the North American plants that have within the memory of living botanists first made their appearance amongst us, since it is referred to by Chaucer:—

> "There sprang the violet all new,
> And fresh pervinke rich of hew,
> And flowers yellow, white, and rede,
> Such plenty grew there never in mede."

The botanical name of the plant is the *Vinca major*, the lesser periwinkle, a very similar plant to this, being known as the *Vinca minor*. In the larger periwinkle—the species we have figured in our plate—the stems, though weak and trailing, are much stronger and

more erect than in the smaller periwinkle; and the leaves of the present species are considerably broader in proportion to their length than in the other plant, in the one case the foliage being what is botanically termed ovate, *i.e.*, approximate to the shape of an egg, while in the other they are lanceolate, a form more resembling that of the head of a lance or spear. The larger periwinkle is as large again in all its parts as the smaller. Both species flower in the spring, and last for some considerable time—in fact, there are few weeks in the year when some stray blossoms may not be met with, though April, May, and June may more especially be considered the flowering season. In our botanical diary we find a note to the effect that we were able to gather some of the flowers on the 1st of January. The flowers vary somewhat in intensity of colour, but the specimen illustrated in our plate may be considered a very fairly typical one. The curious form of the corolla must not be overlooked. It is composed of five similar parts, as in the case of the silverweed, depicted in a preceding plate; but, unlike that and most other flowers, these parts or segments are not capable in the periwinkle of an equal division by an imaginary line drawn from their apex to the centre of the flower. In some few other flowers, as in the St. John's wort, we see this same peculiarity, but it is very exceptional. The great majority of flowers have their petals or segments bisymmetrical in form; a line from apex to base would divide each into two similar parts.

The periwinkle is very commonly met with in woods and hedgerows, and when found at all, is generally in great profusion; and we can readily call to mind an embankment not half a mile from where we are now writing where a

space some ten or twelve yards long and five or six yards broad seems to be the exclusive property of this striking plant, its hundreds of expanded blossoms making quite a grand display in the spring and early summer. The plant is a perennial one, and retains its leaves throughout the winter; hence, if a locality for it be once known, it may at any time be discovered. The leaves are sometimes met with having streaks of lighter green upon the dark rich colour that is characteristic of the foliage. Such varieties are, however, accidental, and comparatively rare. The plant seldom, if ever, ripens its seed—a fact that the opponents of its claim to be indigenous point to in confirmation of their opinion; and, as in other and more southern countries it does so, they have so far a point in their favour, though the fact is by no means a conclusive one. The plant propagates itself by its long trailing and rooting stems, and by their means not only extends itself rapidly in every direction, but manages to gain an almost exclusive possession of the soil, since little or nothing else can maintain its ground against the dense mass of matted stems, that deprive all weaker plants of light and air. The leaves, as will be noticed in our plate, are always placed in pairs upon the stem, while the flowers grow singly from their axils. The calyx is deeply cut.

Though not recognised as having any healing value in the *materia medica* of the regular practitioner, an ointment prepared from the leaves of the periwinkle is largely employed by country housewives. It is reputed to be both soothing and healing in all inflammatory ailments of the skin, though the order to which it belongs includes many species, mostly tropical, that have distinctly

poisonous qualities; and though many of the species are employed medicinally, great care is needed in their administration, and the roots of the British species are very bitter and astringent in their nature. In the Middle Ages its binding qualities were held in such esteem that it was thought they even affected the moral atmosphere, and old writers gravely advise the eating of its leaves by man and wife to establish and confirm them in loving confidence and close affection.

The *V. rosea* may sometimes be met with in cultivation, though it is not sufficiently hardy to brave our climate without protection. It is a native of Madagascar, China, &c. The general appearance and size of the plant is very similar to that of the species figured, but the stems are more upright, and the blossom, instead of being the somewhat dull purple found in both our English species, is a rich crimson.

LESSER CELANDINE

THE LESSER CELANDINE.

Ranunculus Ficaria. Nat. Ord., Ranunculaceæ.

ONE of the characteristic plants of the early spring is the pilewort, swallow-wort, or lesser celandine, the *Ranunculus Ficaria* of botanical nomenclature. It grows very freely in damp spots, and is one of the few plants that will thrive beneath the shade of trees, where it often forms a dense carpet of glossy foliage. Its root produces thick club or fig-shaped tubers, and by these the plant is increased, as they break off very readily, and each tuber, like a potato, produces a fresh plant; if, therefore, the ground be not thoroughly cleansed, any labour spent in clearing them away is but lost, and if the plants are dug into the soil they work their way up to the surface again, the stem branching as it goes upward, and at every joint producing fresh tubers. The flowers appear about the middle of February, though under some very favourable circumstances they may be found by the beginning of the month, and the plant remains in blossom throughout March, April, and May, the month of

April being, perhaps, that in which it may be seen to most advantage. The flowers, as the spring passes into summer, often pale a good deal, and look generally poverty-stricken, probably because the warmth of the lengthening days withdraws from the plants some of that moisture that is so essential to their well-being. The characteristic tubers give the plant its specific name, *Ficaria* being derived from *ficus*, a fig, in allusion to the fig-like form of those members. The significance of the generic name we explain in our remarks on the bulbous crowfoot, another member of the genus. The flower of the lesser celandine forms a very pleasing star, and when seen in the number in which they ordinarily may be met with they light up very agreeably many a dull and sombre corner of the shrubbery or wood. The petals vary a good deal both in number and size—in number when comparing one flower with another, and in size when comparing together the various units that go to make up each corolla. From six to ten is about the average number of petals, though they may be found in even greater number. The surface of the petals is peculiarly glossy. All the leaves grow on long leaf-stalks, and are much simpler in outline than in most of the buttercups, and they have a soft, mucilaginous character that has tempted the bold experiment of using them as an article of diet, either boiled, or in the raw state as a salad. The calyx has only three sepals, a peculiarity that may be noticed in the back view of one of the blossoms in our illustration. The plant derives its name celandine from the Greek word *chelidon*, a swallow, from an old belief that the flower was supposed to appear on the arrival of the swallows, and to die at their departure: the plant, however, appears in blossom long before the swallows visit us, and it,

indeed, owes much of the interest felt in it to the fact of its being one of the earliest pledges that the long reign of winter is ending, and that the brighter days of spring are coming.

> Pansies, lilies, kingcups, daisies,
> Let them live upon their praises;
> Long as there's a sun that sets,
> Primroses will have their glory;
> Long as there are violets,
> They will have a place in story:
> There's a flower that shall be mine,
> 'Tis the little celandine.

The flower was an especial favourite of Wordsworth's; its praises are enshrined in his verses, its blossom carved on the white marble of his tomb. The plant is called the lesser celandine to distinguish it verbally from another having the same name, but which bears no relationship, and has no similarity, to it. The confusion of name seems to have arisen some three hundred and sixty years ago, when John Gerade, a very noted herbalist, published a list of all the plants in cultivation in his garden, on Holborn Hill, and introduced in it, under the same name, this and the celandine proper, the *Chelidonium majus* of later botanists, probably because both may be found in bloom when the swallows arrive, though the same simple principle of nomenclature might as justly have made the primrose, hyacinth, cowslip, anemone, and many other plants into celandines as well—a consummation certainly not devoutly to be desired in the interests of specific identification.

Besides the species already referred to, there are several other conspicuous members of the genus. The great ranunculus, or spearwort—the *R. lingua* of botany—is

perhaps the most striking of these, having stems from two to three feet high, and brilliant yellow blossoms over an inch in diameter. The celery-leaved ranunculus, the *R. sceleratus*, is another very interesting species; in this the flowers, though very numerous, are by no means conspicuous, as they are individually small in size and of a rather pale yellow. The corn crowfoot, the *R. arvensis* of scientific nomenclature, is a third species; it is very ordinarily met with in corn-fields. The leaves are very deeply cut, the flowers rather small; perhaps the most striking feature being the very quaint and curious form of the fruit that succeeds the blossoms.

HAREBELL.

THE HAREBELL.

Campanula rotundifolia. Nat. Ord., Campanulaceæ.

THE graceful little plant that forms the subject of our present illustration is abundantly met with throughout Britain, on hilly pasturage, such as the great ranges of chalk downs in the south of England, on heaths and sandy banks, and springing by the dusty roadsides. It may often be found, too, growing in the interstices of old walls, or springing from crevices in the rocks. Wherever found it is always an added charm, whether dancing in the breeze on the sunny hillside, springing up amidst the purple heath that mantles the common, cheering the sight of the wayfarer as he toils along the bare hard road, or giving one more feature of interest and grace to the choice collection of plants, the yellow stonecrop, the quaint ivy-leaved snap-dragon, the delicate ferns, the grey and orange lichens that spring from every nook and crevice of the old stone wall, or the great rocky masses of the mountain-side. The plant is a perennial, and flowers from the beginning of July to the end of September.

The harebell is, in botanical parlance, the *Campanula rotundifolia*. The generic name signifies a little bell, in obvious allusion to the form of the flower, which, as our readers will readily perceive by a glance at our sketch of the plant, is very bell-like in form. The specific name does not so clearly carry its meaning on the face of it. The word means round-leaved, while a second glance at our illustration at once shows us that the leaves are certainly not rounded in form at all, but decidedly long and narrow, much longer and narrower than the great majority of the leaves of our plants; the name, therefore, at first sight appears almost ludicrously inappropriate. The name, we must confess, does not appear to us a very happy one; but it has some justification, as the lower leaves of the plant are considerably broader than the upper, and those that spring at the base of the stem might very justly be called round leaves. These are, however, rarely seen, partly because they are generally hidden by the other herbs in the midst of which the plant grows, partly because they wither away long before the rest of the plant ordinarily succumbs to climatic influences and the onward march of the year, and will not, therefore, always be found, even if searched for. The English name was bestowed upon it, we are told, because it grows on the dry and hilly pastures frequented by the hare; but we would suggest, at least an alternative derivation—or, rather, the plant itself suggests it—as to whether it may not have originally been named hairbell, from the extremely light and delicate stems from which the blossoms hang. Another plant, equally light and delicate, is named the maiden-hair.

The flowers of the harebell are ordinarily a delicate shade of purplish-blue; but the colour varies a good deal

in intensity, and the flowers may at times be met with pure white. The inflorescence is lax, and made up of but few flowers. These ordinarily droop, though they are not so distinctly pendulous as the flowers of a fuchsia, for example, but strike off at all sorts of quaint angles from the general line. The plant varies very much in height, according to the situation in which it is met with—from an inch or two to about a foot. The stem often branches a good deal. The segments of the calyx are very acute.

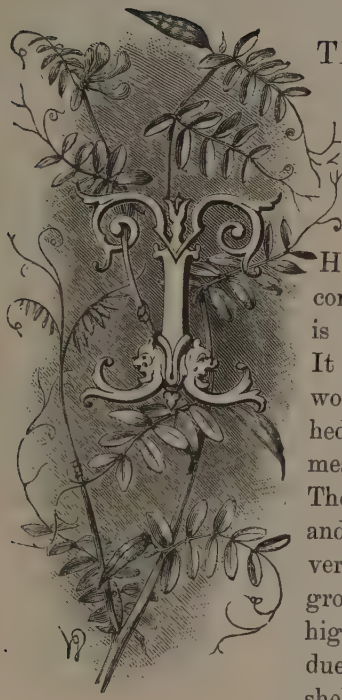
The harebell is in Roman Catholic countries dedicated to St. Dominic. Though so graceful a flower, it appears but seldom in any poetical association in our literature. It is the true "blue-bell of Scotland," though that name has also been bestowed on the wild hyacinth, a plant already figured. Scotland is pre-eminently the land of the mountain and the moor, and it is on just such spots as these that the harebell flourishes, and where the wild hyacinth would never be met with. The claim of the former plant is therefore overwhelming. If we add to this the fact that the harebell flowers throughout the summer and autumn, while the wild hyacinth is but found for a month or so in early spring, we have, we think, said sufficient to show that those who make the harebell rather than the other flower the blue-bell of Scottish poetry have all the probabilities on their side. Grahame refers to the plant in the lines—

> "Nature gives a parting smile.
> As yet the blue-bells linger on the sod
> That copes the sheepfold ring; and in the woods
> A second blow of many flowers appears,
> Flowers faintly tinged, and yielding no perfume."

Ten species of the genus are met with in Britain. Of

these several are sufficiently common to come within the observation of most people. One species, the *C. glomerata*, or clustered bell-flower, may be readily distinguished from all the others by its terminal cluster of sessile or stemless flowers. In all the other indigenous species the blossoms are borne on long foot-stalks. The nettle-leaved bell-flower (*C. trachelium*) and the ivy-leaved bell-flower (*C. hederacea*) are two very common and graceful species. The first has large flowers, and is found in woods and hedgerows, while the second is a very delicate little plant met with in moist shady dells and pastures.

BUSH VETCH, AND SWEET-SCENTED VERNAL GRASS.



THE BUSH VETCH AND SWEET-SCENTED VERNAL GRASS.

Vicia sepium. Nat. Ord., Leguminosæ.
Anthoxanthum odoratum. Nat. Ord., Gramineæ.

THE bush vetch, though not so conspicuous as many other plants, is of very common occurrence. It will ordinarily be found in woods and thickets and shady hedgerows, though it is by no means confined to these localities. The specimen we have figured, and which may be considered a very fairly typical example, was growing by the side of a dusty highway on a hedge-bank, facing due south, and entirely without shelter from the direct rays of the summer sun. The plant is commonly distributed throughout the whole of Britain, and may be found in blossom all through the summer months. We see from the records of a local natural history society that its average first appearance in flower, calculated from observations extending over nine years, is the 22nd of April, the earliest date at which it has been observed being April 14th, and the latest May 5th. Once in flower, it may be met with all through June, July, August, Sep-

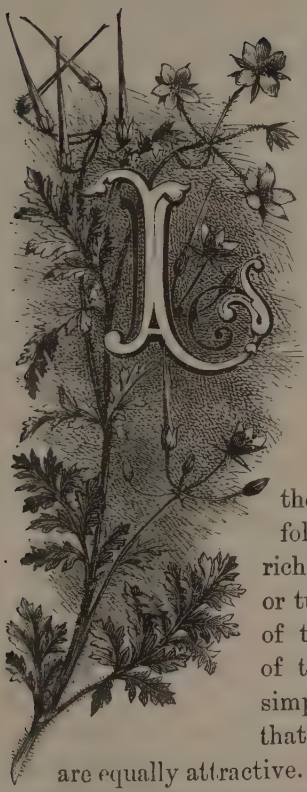
tember, and October, and occasional specimens have been met with even so late in the year as the middle of November. All these dates are, we need scarcely say, open to correction, according to locality. Marlborough, in Wiltshire, where these observations were made, stands on an elevated plateau of chalk, and suffers, therefore, both from the drought and glare of summer, and the chill winds of winter, more than many other places; and in a sheltered valley not more than seven miles away, Pewsey Vale, almost all our wild plants are a full week earlier in their appearance than on the higher ground. The botanical name is *Vicia sepium*. The generic name is, according to some authorities, derived from the Celtic *gwig*, the name of this or some kindred plant; though, its Latin name being *vicia*, this derivation seems somewhat needlessly far-fetched. The English name vetch, like the French *vesce*, and the German *wichen*, is but a corruption of this. The plant is also sometimes called the tare, and in some of the early English writers we meet with a combination or amalgamation of its two familiar names, as it is in old books oftentimes called the tarefitch. This must not for a moment be confused with the tares mentioned in the Biblical parable. The tares of Palestine bear so close a resemblance to the earlier growth of the barley or wheat that it is practically impossible until the grain is in the ear to distinguish the true from the counterfeit, hence the force of the command of the Husbandman, "Let both grow together until the time of harvest." The specific name of the bush vetch simply means "of the hedges," *sepes* being the Latin word for a hedge. The plant is a perennial; the stems are from one to two feet high,

weak, and needing the support of other plants to some extent, though, unlike many of the pea-flowers, the whole plant does not climb or cling round them for support, as it merely uses its tendrils to steady it amidst its surroundings. The leaves are composed of from four to eight pairs of leaflets, the central stalk upon which they are borne not being furnished, as in the ash and many other plants, with a terminal leaflet, but elongated into a tendril, ordinarily, though not invariably, branching out laterally into other tendrils. The flowers, two to six in a cluster, are given off at the axils of the leaves, the stems being very short, and scarcely noticeable on a casual glance. The flowers are, as they die off, succeeded by the seed-pods, bright green in colour, and about an inch in length.

The sweet-scented vernal grass may very legitimately be introduced in the background, as it is amidst the various grasses of the hedgerow that the bush-vetch may be freely found, since they supply numerous points of attachment for the hold of the tendrils, and are strong enough to give support without depriving the plant of its due share of air and light. The sweet-scented vernal grass comes into blossom about the middle of April, when its large anthers, as shown in our illustration, render it more noticeable than would otherwise be the case. It is ordinarily abundant in pastures and meadows, and contributes largely to the fragrance of the new-made hay, as it gives off in drying a delicate scent not unlike the wood-ruff; its specific name clearly points to this quality, while the generic name is compounded of two Greek words, signifying yellow flower, from the colour of its spikes when the plant has reached maturity. It is the *Anthoxanthum odoratum* of botanical nomenclature.

Many of our common grasses will well repay investigation, and there are few things of this sort that are more easily preserved. The collection of dried flowers is often but a sorry substitute for the plants in all their living beauty, as the necessary flattening out destroys much of the charm of the growth, while the colours that were in nature so beautiful, in too many cases become sadly dulled. The difference between the real growth and its mortal remains is too suggestive of the contrast between life and death to be agreeable, the forms are a mere mockery of the past; but grasses more readily adapt themselves to these altered conditions, for flatness is not so fatal to their grace, nor have they the brilliancy of colour that we find in flowers, while there is a certain dry and tough quality about them that, as contrasted with the succulence of many vegetable growths, is a still further advantage. Should our readers commence the collection of grasses, they will, we are sure, rapidly find the pursuit an interesting one, and they will probably have little idea until they actually submit the matter to this practical test of experience how great a number of grasses may in almost any district be found, or how varied they are in form and character.

STORK'S-BILL.



THE STORK'S-BILL.

Erodium cicutarium. Nat. Ord., Geraniaceæ.

AYING to heart the fact that comparisons are proverbially odious, and ordinarily very inadvisable, we think, nevertheless, we may be justified in saying that amongst the many beautiful little blossoms scattered around us few are more graceful and attractive than the stork's-bill. Whether we look at the beautiful richness of form of the foliage, a feature that is especially rich when the leaves are seen in a mass, or turn to the delicate colour and form of the blossom, or the quaint rigidity of the beak-like fruit—using the term simply as a convenient word to express that which follows the flower—all alike are equally attractive. The truth is, possibly, that a large number of our little plants are so pleasing in themselves, that almost any one that comes uppermost possesses many features that are interesting and beautiful to a lover of these lowly forms, and it is quite possible that had the subject before us been a primrose or herb-robert, a piece

of bugloss, or any other of fifty different flowers, we should have felt little difficulty in persuading ourselves, in full view of its charms, that, if not absolutely the most attractive of our plants, it was at least fully entitled to a place in the front rank.

The common stork's-bill, or *Erodium cicutarium*, as it is termed in the nomenclature of science, derives both its common and generic name from the likeness—a somewhat fanciful one, surely—of the long and pointed form of the fruit to the bill of a bird; hence, too, while the present species is called the stork's-bill, an allied genus is composed of plants that, from the great similarity in form of the corresponding part, are called crane's-bills. Of this latter we have figured the meadow crane's-bill, and shall give the herb-robert. The generic name of the crane's-bills is *Geranium*, a word derived from the Greek *geranos*, a crane, and in like manner the generic name of the present species, *Erodium*, is taken from the Greek word for a stork. The specific name (*cicutarium*) of the stork's-bill is derived from the Latin word for the hemlock plant, *cicuta*, and is bestowed on this plant from a certain resemblance between the forms of the leaves of the stork's-bill and those of the hemlock. The resemblance is, however, a somewhat superficial one, and points of difference are at once apparent on any real investigation and comparison. *Cicuta* is the classic name for the hemlock, not the scientific one; botanically it is the *Conium*, a name of very fanciful origin. The plant was thus named by Theophrastus from the Greek word for a cone or top, the whirling motion of which latter object was supposed to indicate something of the giddiness that seized those who were so imprudent as thoughtlessly to taste this

poisonous plant, or so unfortunate as to find in it their death penalty for treason to the State.

The stork's-bill is very generally distributed, though in some localities it is much more common than in others. It should be looked for on rather dry waste ground, or mingling with the crops in cultivated fields. A variety of the plant, that by some botanists has been classed as a separate species, is sometimes found near the sea-coast. When elevated to specific rank it is the *Erodium hirtum*. Many plants vary considerably from the type form when found in a maritime district. We are not ourselves acquainted with this variety, and can therefore express no opinion, but it is ordinarily regarded as but a variation from the type, and not of sufficient distinctness to be recognised as an independent species.

The stork's-bill flowers throughout the summer. The main stems are ordinarily about a foot in length, but as the general growth of the plant is not so erect as in many other species, it does not quite attain to that height, and sometimes the plant rises no more than six inches from the ground. From the free branching of the stems it is a somewhat bushy-looking herb. Most of the leaves spring directly from the root, and they are very deeply cut, and are borne on long stalks; those on the stems have shorter stalks than the radical leaves. Both stems and leaves are covered with short hairs. The flowers spring in an umbel from the summit of the flower-stalk, or peduncle. The flowers, though generally pink, are sometimes purple or white. The stamens are ten in number, but only five of these are truly developed the alternating forms being sterile and rudimentary.

The genus includes two other species, though these are

both rare. The musky stork's-bill, or *Erodium moschatum*, so-called from the strong musk-like odour of the foliage, is a much larger plant than the common species. The leaves are less finely divided, and the blossoms are of a bluish tint of purple. It is found on waste land, but is very seldom seen. The remaining species is the sea stork's-bill, or *E. maritimum*. In this the leaves are simple in form, the flowers growing singly or in pairs, and purple in colour. The whole plant is hairy. It is occasionally found on sandy sea-coasts, but it is only recorded from a few localities. It is a very small plant, and one that unless really searched for, would scarcely command attention, even if it caught the eye.

BRAMBLE.

THE BRAMBLE.

Rubus fruticosus. *Nat. Ord.*, *Rosaceæ.*

FEW plants, perhaps, are more readily recognised by the generality of people than the blackberry, or bramble, while perhaps few are less readily identified by the botanist. Certain broad features at once present themselves, and enable any one of ordinary observation to say that a given plant before him is the blackberry, while many minor features become visible on close and attentive study. The once simple bramble becomes a very Proteus amongst plants, and develops into almost any number of species; and, unfortunately, these species are by no means all equally recognised or recognisable, so that while some will tell us that there is but one true blackberry, with many aberrant forms, another will tell us that nine distinct types are clearly recognisable, a third will say not nine but twenty, while Professor Babington finally divides the British *Rubi* into forty-one species. Into the minor points that are necessary when such precision of classification is striven after we need not here enter;

suffice it for our present purpose to take what may fairly be called the ordinary type, that known to some botanists as the *Rubus fruticosus*, or common bramble.

The root-stock of the blackberry is perennial; from this the flowering stems are produced; these are ordinarily biennial, and grow woody in substance. Though at times found shooting upward and maintaining the erect position, they are more often rather wild and straggling-looking, sometimes arching so much as to touch the ground, when they root afresh and throw up new shoots. The stem is generally pentangular in section, though the angles are not always clearly developed, and it is often lavishly furnished with prickles, whose powers are well enough known to those who have ever tasted the delights of "going blackberrying." A delicate and beautiful lilac bloom is often found on these stems; at other times they may be found a delicate pink or pale greenish-grey. Where the stem is clearly angular it will generally be noticed that the prickles, abundant as they are, are only met with on the angles themselves. The leaves are usually composed of five leaflets, a central and two lateral ones, all of about the same size, and beneath these a pair which are generally considerably smaller. At other times this second pair of laterals is missing, and only indicated by a boldly projecting lobe on the lower edge of the other pair. In the upper leaves the leaflets are often only three in number, as may be seen in our illustration, though even there a slightly projecting serration or two from the lower edges gives what we may term a suggestion of the missing pair. Not only the leaf-stems, but often even the midribs of the leaves on their lower surface, are armed with sharp prickles, while the general under-surface of the

leaf is more or less commonly covered with a white down or felt. Our readers will, we trust, excuse the absence of anything more definite. In writing of a plant that varies in so marked a degree, it is impossible to draw a hard and fast line, though we are very conscious that it may be as painful to others to read such a series of halting definitions, such a free use of the words often, generally, more or less, as it is to us to pen them. The blossoms are either white or varying degrees of pink. The petals are five in number, and of a delicate satin-like texture, and as they surround the mass of deep yellow anthers in the centre, form with it a very pleasing and beautiful flower.

The fruit is almost as literally black as the name of the plant implies, for it is, when ripe, so deep a purple as to appear almost black. Before ripening, the berries are first green, then bright red; and as the fully-matured fruit and those in all stages of progression towards this luscious consummation may be met with on the same spray, the contrast of colours is often very marked, and not without its charm. When the fruit is ripening, and, in fact, directly after flowering, the sepals of the calyx are turned downwards, as may be seen in our illustration. They do not, as in the dewberry and cloudberry, other species of the genus, surround the base of the fruit.

The generic name of the blackberry, *Rubus*, was bestowed by Linnæus; it is supposed to have been suggested by the Celtic word *reub*, to tear. The specific name does not, as some novices might imagine, mean fruit-bearing; the word would in that case have been *fructuosus*. *Fruticosus* is a Latin word, derived from the word for a bush or shrub, and refers to the bushy nature of the plant. The word blackberry is too self-evident in its

meaning to need any exposition; while the other common name, bramble, is interesting as showing both the indigenous nature of the plant, and how little these vulgar names change as they are handed down from generation to generation, and from century to century; the word is but a slight modification of the old Anglo-Saxon word for it, *bremel*.

The bramble was at one time highly commended as a material for hedgerows; and it is probably owing in some degree to this fact that we find it so universally distributed in such situations, though on open commons and moors it may frequently be found leading an entirely independent existence, and certainly owing nothing of its origin to the intervention of man. The long trailing stems are sometimes employed in country districts to bind the thatch on corn-stacks; and the fruit, we need scarcely say, is largely eaten both in its raw state and as a preserve.

HONEYSUCKLE.

THE HONEYSUCKLE.

Lonicera Periclymenum. Nat. Ord., Caprifoliaceæ.

WE have in Britain three species of honeysuckles—the perfoliate honeysuckle, the fly honeysuckle, and the present species, which is much the commonest of the three. It may very frequently be met with in all parts of the country, in the woods and trailing over the hedgerows. It flowers from June until the end of September. Its beauty, as it hangs in graceful festoons from the tree-trunks, or drapes the shrubs in the coppice or hedge, has made it at all times a favourite. Milton and Shakespeare, to say nothing of many of the lesser lights of poesy, have sung its praises in appreciative strains. Both with the poets and the old herbalists the plant is often called the woodbine; either name seemed to be equally common. Shakespeare, in the *Midsummer Night's Dream*, calls it "the woodbine, the sweet honeysuckle," and in another passage it is the "caprifole," a name that is also given to it by Spenser. This latter name is used

botanically for another of our English species, though, from the rare occurrence of the plant, we can hardly conclude that it was this rather than the very common species that our two poets intended to introduce.

The species represented in our illustration is botanically the *Lonicera Periclymenum*. The generic name was bestowed upon these plants by the great master of natural science, Linnæus, in honour of a fellow botanist, Adam Lonicer, a German, a custom at one time very prevalent, and which is still, to a certain degree, in vogue. The genera *Sherardia*, *Frankenia*, and *Knautia* of our English flora are thus named in honour respectively of James Sherard, an English botanist; of John Franken, a Swede, Professor of Medicine and Botany in the University of Upsal, where he died in 1661; and of Christopher Knaut, a great Saxon botanist of the seventeenth century. *Bartsia*, *Hutchinsia*, *Mertensia*, *Sibthorpia*, and many others may also be met with in our lists. In some few cases the name of a plant has been given to it from some more or less fanciful analogy; thus the *Bauhinia* was so called in honourable remembrance of Caspar and John Bauhin, the deeply two-lobed leaves of the genus suggesting these plants as being most appropriate to bear the fame of the two brothers to posterity. Though all the examples given hitherto have been of a pleasant nature, there are some, though these are happily few in number, in which a little malice has been exercised in the choice of a name, but of these we need give but one illustration. The *Hernandia* was thus called from a man whose botanical pretensions at one time placed him in a position of considerable pecuniary responsibility, but whose discoveries were by no means an equivalent for the support afforded

him, the point of the sarcasm being that the plant selected to bear his name throws up a conspicuous mass of foliage, while the flower and fruit are, when produced, very small in proportion to what might be anticipated.

The common name honeysuckle clearly points to its sweetness and melliferous qualities, while woodbine, though endeared to us by poetical associations, does but express its binding hold on the trees to which it owes its support. Its long woody boughs exercise a considerable restriction on the growth of young wood; we have often seen young hazels deeply furrowed in spiral lines by the tightness of its hold, and in such a case it cannot but be injurious.

The branches of the honeysuckle stretch for long distances over the hedgerow, and reach to a very considerable height up any trees that may be available for their support. Few can have wandered down some lane in the summer-time without noticing the long lines of the honeysuckle stems running up the tree-trunks, or waving in the wind from amidst their lower branches; tossing their graceful clusters of blossom to the breeze, and filling the air with their fragrant odour—an odour that often reveals its presence before the eye is caught by the masses of delicate blossoms. The leaves always grow in pairs, and are somewhat pointed and egg-shaped. The flowers grow in large bunches, all springing from one point at the extremities of the branches. The blossoms vary very considerably in colour, some being almost white, others decidedly pink, while others again are a deep warm tint of yellow. The form of the blossom, with its elongated tube and widely-extended mouth, the far-protruding stamens and the quaint curls and twists assumed by the lips, is very pleasing, as may be seen in our plate, and the forms of the buds before opening

are equally striking. The stamens are five in number, and the long central style will be seen like a thread issuing from their midst. The clusters of berries that succeed the flowers are of a deep crimson colour.

The perfoliate honeysuckle (*L. caprifolium*) may, at rare intervals, be met with in a wild state; it is very common in old-fashioned gardens, and at times, as a cast-away, gets established, though it is not truly indigenous. It may at once be known by the bases of the pairs of leaves growing together, so that the stem appears to penetrate through the centre of a double leaf. The flowers are very similar to those of the common kind. The fly-honeysuckle (*L. Xylosteum*) is so rare in a wild state that it is altogether beyond our scope to give particulars of a plant that none of our readers may probably find, and that in any case has no claim to be considered indigenous.

VALERIAN.

THE VALERIAN.

Valeriana officinalis. Nat. Ord., Valerianaceæ.

THE great valerian, the subject of our present illustration, should be looked for in damp and shady situations. It may ordinarily be abundantly met with by the sides of ditches and streams, and in the tangled undergrowth in moist woods. It is a perennial, and flowers during June, July, and August. It is found throughout Britain; but in the north it is often encountered on more elevated and drier ground than it appears to affect in the southern part of the island, and in this case the plant becomes smaller, and more densely covered with hairs. Though none of the varieties wander far from the typical form, the valerian appears to be more subject than many plants to slight deviations from the normal state of things, hence several more or less permanent varieties have been recognised, named, and figured by various writers. Of these we need

only here definitely refer to the *V. sambucifolia*, a variety which derives its name, signifying elder-leaved, from the form of its foliage, the segments being fewer and broader than in the type form, and assimilating in character to those of the elder.

The large size of the plant, its erect and sturdy-looking growth, and the crowning mass of light-coloured flowers, are all points that tend to make the plant conspicuous when it is seen growing in the sylvan shades, and the rich dark green of the leaves and their beautiful form render the plant attractive to the lover of natural grace and beauty, both before and after its time of flowering.

The root of the valerian sends out numerous large fibres, and has valuable medicinal qualities. This root sends up one stem only, and this attains to a height of some three or four feet, round in general section, but a good deal grooved, hollow in the interior, and more or less hairy, the hairiness being most conspicuous near the base. It terminates in two or more pairs of flowering stems, each pair being placed at right angles to those above and below it. The lower flowering stems lengthen sufficiently to place their flowers nearly or quite on a level with the flowers borne by the upper branches, so that the general mass of bloom does not run down the stem, as in a hyacinth, but forms a broad and flattened cluster at the summit. The leaves are arranged in pairs, and are united at their bases. Each leaf is made up, as may be well seen in our figure, of a series of lanceolate segments, or leaflets, that are placed more or less opposite to each other on either side of the mid-rib of the leaf. These segments vary very much in number, anything between ten and twenty being encountered. The segments, too, vary a

good deal in breadth, being broad when they are few in number, and narrower when more numerous; their length will ordinarily be from two to three inches. The outline is marked by a few coarsely-cut teeth. The upper surface shows the veining very clearly, the under surface is paler in colour, and often more or less clothed with short and soft hairs. The flowers are small and tinged with pink and flesh-colour, their odour being somewhat peculiar, and to most people slightly disagreeable. The corolla is tubular, but without the spur that we have seen is so marked a feature in the red valerian, a plant that we have yet to figure in our series. From the midst of the five lobes of the corolla rise the three stamens, a curious combination of numbers, as we almost invariably find that all the parts of a flower are in some numerical harmony, being multiples of some one number. Thus in the geraniums the petals, the sepals, and the carpels are all five in number, and the stamens are twice five, while in the lily of the valley the perianth is cleft into six lobes, and the stamens are six in number, and the ovary is three-celled. Our readers will have no difficulty in multiplying examples from their own observation, as it is very exceptional to find a plant wherein this arithmetical harmony is not a marked feature.

The plant owes both its generic and specific names to its medicinal value. The generic name is from the Latin verb signifying to be powerful, while the second name indicates its officinal value. One old name for the plant was phu, or, as we should now say, faugh! an expression of aversion, the plant having a somewhat strong and disagreeable smell that becomes more especially noticeable when one attempts to gather it. At the same time, it appears to us that there are many plants to which the con-

temptuous "phu" could be more justly applied. A more agreeable name for the plant is all-heal, the leaves being applied by the country folk to fresh wounds; and an old name, now rarely found, but to be met with in Chaucer and others of the older writers, is Setwall or Setewall, a name supposed to be a corruption from the mediæval Latin name of the plant; but the derivation appears to us too far-fetched to be of any real value. In Ireland the plant is the *Kearin Leana,* and in Wales we believe it to be the *Llys Cadwgan,* though on turning to Gerarde we find that he gives *Y Nyfiewyn bendigedie*; possibly this may be an older word, but as a knowledge of Welsh is not, unfortunately, one of our possessions, we must leave the point unsettled. The mediæval herbalists called the plant capon's tail, on account, we are told, of its spreading head of white flowers—to our minds, a very unsatisfactory explanation. Other old names were *Theriacaria, Marinella, Amantilla, Genicularis,* and *Terdina.*

SMALL KNAPWEED.

SMALL KNAPWEED.

Centaurea nigra. Nat. Ord., Compositæ.

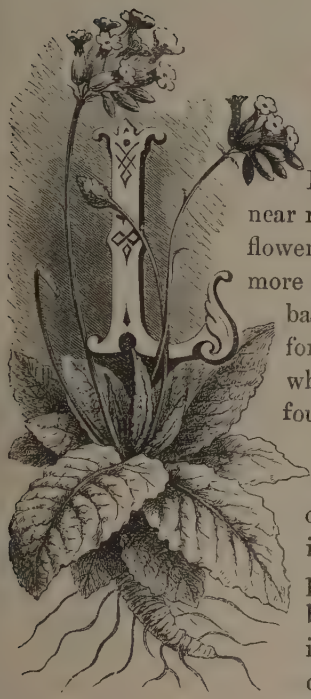
WHILE the small knapweed has not the showy attractiveness of the greater knapweed, or *Centaurea Scabiosa* (a plant we also include in our series), it is one of our most familiar wild flowers, and must certainly not be overlooked by us. It thrives excellently in pastures, and its crimson heads of blossom may be seen springing from the midst of the surrounding verdure on almost every hedge-bank. The plant is a perennial, and may be found in flower from early in June until well in September. It has much of the general appearance of the thistle, but the formidable spines so characteristic of the thistles are absent. Though its crimson heads attract us as they spring up in the meadows, the farmer is conscious of an altogether different feeling, for the small knapweed is a harsh and wiry plant—as all who have ever tried to gather a piece can bear us full witness—and it is seldom touched by

horses or cattle, either when growing, or when dried in the hay. It is, moreover, a difficult plant to extirpate, and its tough stems blunt the mower's scythe as well as give him extra trouble in mowing, by the resistance they offer to the onward swing before which the grass falls resistless. Martyn, in his "Flora rustica," speaks of it emphatically, we see, as "a bad weed among grass." It increases very freely by means of its roots. The stems of the small knapweed are erect in general direction, but freely branched. They attain a height of from one to two feet, or sometimes in hedge-banks even more than this. There is often a slight downy substance on the stems, while the stems themselves, and especially the lower portions of them, are not unfrequently tinged a purplish-red. The lateral branches spring in an alternate arrangement from the central stems. These lateral stems have a curious way of increasing in bulk and thickness as they approach the flower-heads. The leaves are rather rough and harsh to the touch, and of a somewhat dull green, and many of them have a slightly cottony under-surface. The leaves vary in form, according to their position on the plant, the upper leaves being of the form called lanceolate, or like a lance-head in shape; these are almost, or entirely, without any unevenness of outline, and those that are nearest the flower-heads are generally much smaller than the others. As the eye runs down the plant, we find the margins of the leaves growing more notched. The lower leaves are much longer and broader, too, in proportion to their length, than the upper, and their outlines are often deeply serrated or lobed. The involucres, whence the florets spring, are globular and dense, thickly clothed with overlapping scales that are much fringed at their margins. These scales are very

dark in colour. The florets are of a rich crimson tint, and either all fertile and similar in character, or sometimes found with an outer row of larger and neuter florets, as we see in the greater knapweed, *C. Scabiosa*, or the corn bluebottle, *C. Cyanus*. As we figure both these latter in our series, a comparison between them and our present illustration, that of the un-rayed lesser knapweed, can readily be made. The aspect of the plant under these two conditions is so different, that many of the older botanists have made two distinct species, the form we figure being the *C. nigra*, and the type having the outer ring of larger rays being the *C. nigrescens*. It is now, however, satisfactorily ascertained that the two forms are merely modifications of the same thing, and the present form being considerably the commoner is accepted as the type form, and the other as a variety of it. Ray, in his "Historia plantarum," a folio of which the first edition was published in the year 1686, affirms that the variety is no less frequently met with than the common sort in the west of England, and tells us that some flower-heads were even brought to him, in which not only the outer ring but the whole head, was composed of neutral florets. This latter peculiarity is very exceptional, and, in spite of Ray's assertion to the contrary, we must still believe, judging from our own observation over the country, east, west, north, and south, that the rayed variety is almost always a rarity compared with the typical form—the form we illustrate. We sometimes find plants in which the leaves are a good deal more cut than in the ordinary examples, and, like almost all crimson or purple flowers, we may, though very rarely, find the plant varying with white florets. Martyn quotes many provincial names,

as, knap-weed, knop-weed, knob-weed, horse-knops, hard-head, hard-irons, horse-knot, and matfellon; and to these may be added others, as, bottle-weed, bull-weed, churl's-head, and logger-head. Many of these names clearly at once refer to the hard, knob-like heads of the flowers, knap and knop being evidently corruptions, provincialisms, and old English equivalents for the word knob—in fact, knop may be found in this sense in the Bible. Hard-head arrives by another road at the same significance. The words horse-knops and horse-knot carry in their second syllables a meaning we are already familiar with, and the first half of the words is an illustration of the use of animal names to express various depreciatory qualifications. Thus the use of the prefix dog almost always implies worthlessness, and that of horse frequently carries with it a sense of coarseness, as horse-mushroom, horse-radish, horse-thyme, and horse-mint; other examples may readily be found.

COWSLIP.



THE COWSLIP.

Primula veris. Nat. Ord., Primulaceæ.

LIKE the primrose, the cowslip, its near relative, is one of the characteristic flowers of the spring, the primrose being more especially met with on the hedge-bank or in the coppice, localities affording some little shade and shelter, while the cowslip will ordinarily be found on open pasture and downland.

The cowslip is the *Primula veris* of the systematic botanist. The origin of the vulgar name is obscure; it has been suggested that it is probably a corruption of cow's-leek, but this would only appear, assuming it to be so, to remove the difficulty one stage farther back, as one fails to see any more distinct appropriateness of title in the possibly primitive form of the word. The plant is also in some parts of the country called the paigle, and in old herbals, the Herb-Peter, the pendant flowers faintly suggesting a bunch of keys, the badge of the great apostle.

The cowslip, like the primrose, may fairly be considered one of the flowers of the poets; Shakespeare and

Milton, to say nothing of many lesser names, frequently introduce it in their writings. Milton calls them the

"Cowslips wan that hang the pensive head,"

a description full of truth, for though the corolla of the blossom is a brilliant and pure yellow, the calyx, which forms considerably the larger portion of the flower, is of a very pale green tint, while the hanging blossoms are another very obvious and characteristic feature.

The flowers are arranged in what is termed botanically an umbel, a term employed to express the form of inflorescence wherein the blossoms are borne on little stems that all spring and radiate from one point. The flowering rush affords another good instance of this umbellate arrangement of the flowers: a drawing of it will be found in our series. The number of flowers in the umbel of the cowslip varies very much in different specimens. It is a curious fact that the inflorescence of the primrose is as truly umbellate as that of the cowslip, though in the former case it can only be detected by carefully tracing the flower stems to their base, when all will be found to spring from one common point. In some varieties of the primrose the umbel is raised on a stalk, as in the cowslip. This form is sometimes called oxlip; it is by some writers raised to the dignity of an independent position as a true and distinct species, while others regard it as one of a number of intermediate hybrid forms that may be observed between the primrose and cowslip. Others again consider it but a modification of growth of the former plant. Primrose roots may at times be met with that bear both forms, one or more stalked umbels together with a number of the ordinary type.

of flower. Linnæus went so far as to group the primrose, the cowslip, and these various intermediate forms together, and to consider them but so many variations of one typical specific form. The whole question is one of great interest, though its full consideration would be foreign to the aim proposed in our present pages, for the primrose and the cowslip, though passing imperceptibly into each other, are in themselves so different that our readers may, for all practical purposes, feel full justification in believing in the distinct individuality of the flowers that in the one case we call primroses, and in the other, cowslips.

The cowslip contains a large quantity of honey, and is, therefore, a great favourite with the bees, and many of our readers will recall the lines in the *Tempest*—

> "Where the bee sucks, there suck I,
> In a cowslip's bell I lie."

It is also in many parts of the country in request for the making of wine. In olden times the cowslip was deemed particularly beneficial in all paralytic ailments, and is often called the palsy wort, or *Herba paralysis.* The common name, paigle, it has been suggested, is a corruption of these monkish names, but such a derivation appears to us, we must confess, decidedly strained and far-fetched. As the head of flowers is sufficiently like a bunch of hanging keys to have earned it the name of Herb-Peter, as we have already seen, and to make it in Germany the *schlüsselblume*, or key-flower, the theory has been started, that possibly the word paigle may have originated in the Middle Ages as a vulgar corruption of the Latin *clavis*. The Anglo-Saxon name is *cuylippe* or *cuslippe*.

The old writers, as was their wont in most other cases,

give a lengthy catalogue of ills that may be remedied by due application of the flowers, roots, or leaves of the plant. A distillation from the blossoms adds to beauty, or restores it when lost; an ointment made from the flowers removes all spots, wrinkles, and other blemishes: "The leaves are good in wounds, and the flowers take away trembling." Its potent effects under various forms of preparation may also be exerted on "vertigo, false apparitions, phrensies, falling sickness, palsies, convulsions, cramps, pains in the nerves," and many another sad infirmity in the list of fleshly woes. We can only conclude, as we look around, that the herb must either have sadly lost its efficacy in these later days, or men their faith in its powers, for the tide of human misery rolls on as though the cowslips no longer dotted in their thousands the verdant meadows, or the breezy slopes of the rolling downs. Any health-giving properties they possess will probably rather be found in the search for them than in any more formal application.

TOADFLAX.

THE TOAD-FLAX.

Linaria vulgaris. Nat. Ord., Scrophulariaceæ.

E meet with the toad-flax, or *Linaria vulgaris* of science, very commonly throughout England, Ireland, and Wales, but in Scotland it is only found at all commonly in the south; in the northern counties it may at times be seen, but it may then be considered one of the rarer plants. It is almost exclusively a plant of the hedgerow, where its upright growth, its profusion and the brilliancy of its blossoms, tend to make it a somewhat conspicuous and very pleasing feature. The plant flowers from July to October. It is a perennial.

The stems are very erect and branch but slightly; they are ordinarily between one and two feet high, though at times this may be exceeded. Both stem and leaves are of what is termed botanically a glaucous green—a term employed to express a pale bluish tint of green accompanied by a slight bloom on the surface—and are almost entirely without the hairs that form so conspicuous an addition in many plants. The leaves are very numerous,

and very long and narrow in form. The flowers are large, of a pale but beautifully pure tint of yellow over most of the blossom, but having one portion a deep rich orange. It is asserted that the smell of the flowers is very obnoxious to flies, and that they may be kept out of a room by keeping toad-flax in it; but we have never ourselves thought to put the matter to the proof. The present species, though from its commonness ordinarily merely called toad-flax, is in botanical works distinguished as the yellow toad-flax, as a means of identifying it amongst the numerous other species of the genus that are indigenous to our islands. The blossoms of the toad-flax always grow in a rather compact mass at the summit of the stem, and form a very handsome termination; this feature may be very well seen in our illustration. The flowers are of a rather peculiar form, and very similar to the garden snap-dragon, a plant belonging to an allied genus, and possibly better known to some of our readers than this wild flower. The flower of the toad-flax is, however, if anything, just a little more quaint and curious than that of the snap-dragon; both have the same large lip-like forms that, when pressed open, suggest the yawning mouth of some fierce monster, but in the toad-flax the flower bears in addition a very curious spur at its base. A remarkable, but not altogether rare, variety of the plant is met with at times—though we have never ourselves been so fortunate as to come across it—in which all the blossoms have five spurs and other singular modifications of form that can hardly be well defined in so brief a space as we can spare. As all the flowers of the plant are of this abnormal character, the general appearance is very peculiar in itself, and very distinct from the normal effect. The fruit

following the blossoms is a rather large capsule, somewhat egg-shaped, and full of large seeds. With the exception of the one remarkable variation already referred to, the plant is subject to very little change—abnormal forms are very rarely met with. The flowers appear to form a welcome shelter to many small insects. While making the drawing of the plant for our plate, we found several small beetles ensconced beneath the upper member of the flower—in the very jaws of the dragon, in fact—and two or three other kinds of insects were in like position.

The generic name of the plant is taken from the Latin *linum*, flax, the general appearance of this and one or two other species being, when not in flower, not at all unlike the true flax. In the old writers we find the name toad-flax is applied exclusively to those species that have narrow and flax-like leaves; the present plant is also sometimes called wild-flax or flax-weed from this accidental resemblance. The prefix "toad" was do doubt added—on the same principle as we may see "dog" employed — as an indication of worthlessness, because the thing, while looking like a plant so serviceable, was, after all, spurious and valueless. According, however, to some old writers, it is so-called because the flower has "a mouth like unto a frog's mouth." A few plant-names arise from a certain sense of humour on the part of those who first started them. Thus hemp, from its use in providing the halter for the law's dread requirement, is in some old books called gallows-grass, while others call it neck-weed; and this grim jesting changes into contempt in the names, dog's orach, dog-violet, hog-fennel, swine's-cress, and horse-mint. The fool's parsley may also here be cited, as the plain inference is that it is a worthless counterfeit of a

plant of great use, and that none but those to whom the prefixed name fully applied would eat this poisonous herb in mistake for the garden plant which it slightly resembles. The toad-flax is often known in country districts as the butter and eggs, the pale yellow suggesting the first part of the name, the deep orange standing for the yolk of an egg. It is also often called wild snapdragon.

The only other species of the genus that can fairly claim to be classed amongst our common plants is the ivy-leaved toad-flax (*Linaria cymbalaria*). Though not truly a native of Britain, it has in many places so thoroughly established itself as to claim abundant recognition. The plant is small, and grows in the fissures of old damp walls. The leaves are somewhat fleshy, deep green above and often dull purple beneath. Flowers small, purple and yellow in colour. The whole plant is very graceful in appearance, as its long trailing stems, clothed with delicate leaves, hang in masses from some rugged and moss-grown wall.

PINK PERSICARIA.

THE PINK PERSICARIA.

Polygonum Persicaria. Nat. Ord., Polygonaceæ.

THE *Polygonum Persicaria*, pink persicaria, or, as it is sometimes called, the spotted persicaria, is very frequently met with on waste ground, in gardens, and by the roadside, and is more particularly abundant when such localities are somewhat damp and low-lying. It is an annual, but seeds freely, and our readers will have but little difficulty in finding specimens. Its small and insignificant-looking blossoms are met with from July to October. Eleven to fifteen species of polygonum are reckoned as indigenous to Britain, the difference in the number being, as we have seen in the case of several other plants, the result of the greater or less importance attributed to certain modifications and differences of structures—differences that appear to some botanists sufficiently distinct and permanent to justify their giving them

specific value, while other botanists, less convinced of the reality and permanency of the modification, regard it merely as a variation more or less fleeting and valueless, and consider the plant thus distinguished as but a sub-species at most, or a variety from the true typical form. We may see this very plainly in some other cases; the number of species of roses, brambles, or willows, for example, differs most widely according as the classification of one or another authority is taken up and adhered to.

The pink persicaria has long fibrous roots. The stems are numerous, in general growth erect, but freely branching, sometimes indeed so freely as to give the plant a rambling and spreading appearance, though more ordinarily the general growth has a decidedly upward tendency, as we have indicated in our drawing. The stems are often more or less reddish in tint, and at the points where a lateral stem branches off swell very considerably, hence the generic name, derived from two Greek words, signifying many knees or joints, the expansion of the stem and the angle it makes at each point of branching being very suggestive of the knee-joint. At these points the plant is particularly brittle, and snaps very readily. The leaves are lanceolate in form, the lower ones stalked, the upper ones springing direct from the stem, and having at their bases sheathing stipules. The foliage is generally glabrous, *i.e.*, without hairs of any kind, but a variety with hairy leaves is occasionally met with, which has been by some writers elevated to the dignity of a distinct species, under the name of *Polygonum incanum*. The leaves are very frequently marked with a large dark spot or blotch of purplish-black in their centres, a feature that has procured for the plant its name of spotted persicaria. The numerous little blossoms,

inconspicuous in themselves, are arranged in a dense spike at the termination of the various branches. These spikes are cylindrical in form, about an inch or so in length, and have often a small subordinate mass of blossoms at some little distance below them, though this is not by any means a constant feature. The general tint of the spike is ordinarily a greenish red, as the general mass is a dull green in colour, but the tips of the flowers are of a clear but light rose tint; colours that at a little distance blend together into a somewhat dull tint, inclining more or less towards green or red, according to the development or non-development of the blossoms. The perianth is composed of five segments, while the styles are usually two in number, and the stamens six, a somewhat unusual numerical combination. At times the styles vary to three —in either case, however, in numerical proportion with the stamens, but out of harmony with the five segments of the perianth.

The persicaria is a plant subject to very considerable variations, though these variations, consisting as they generally do in the greater or less density of the blossoms on the spikes, their more or less pink colour, and the degree of development of the stems, or their ruddiness of hue are, after all, of a nature that need scarcely puzzle even the novice in his attempt to name the plant.

Of the other species of the genus we need refer but to a few. The knot grass (*P. aviculare*) is a small plant, often trailing, but at times erect, the little pink flowers in clusters in the axils of the leaves, the leaves an inch or so in length. It is an abundant plant in corn-fields and on waste land. The climbing buckwheat (*P. convolvulus*) is another very common species; its long stems, encircling

the other plants of the hedgerow, or running up dahlia or raspberry stakes in the garden, are a very characteristic feature. The amphibious persicaria (*P. amphibium*) is another species of frequent occurrence. It is ordinarily found near the margins of lakes or ditches; its floating leaves and spikes of bright rose-coloured blossoms are features that will aid in its identification. The water-pepper (*P. hydropiper*), so called from its acrid taste, is frequently to be met with by the side of water; though very similar to the common species, the plant figured in our plate, it is considerably more slender-looking, and smaller in all its parts.

TORMENTIL AND CINQUEFOIL.

THE TORMENTIL AND CINQUEFOIL.

Potentilla Tormentilla; P. reptans.

Nat. Ord., Rosaceæ.

IN all probability the two very similar plants herewith figured will be familiar to most dwellers in the country, for insignificant as they may appear in comparison with the lordly foxglove, the long, trailing, flower-covered stems of the wild rose, or the rich masses of hawthorn bloom, plants that must be known to every one, they yet, by their wonderful profusion, and the large surface of ground they ordinarily cover, compel in the aggregate the attention that would hardly be given to an isolated specimen. Few hedgerow banks in the spring are not brightened by the large yellow flowers of the cinquefoil, or tapestried over with its masses of beautiful leaves, while the more open ground, the common, or the moor, is equally abundantly decked with the little golden blossoms of the tormentil.

The cinquefoil, the plant in our plate with the larger

flowers and leaves, is, botanically, the *Potentilla reptans*. The generic title is derived from the Latin *potens*, powerful, several plants of the genus being, in the Middle Ages, accredited with potent medicinal properties. If these properties ever had any real existence the plants yielding them have now given place to others that possess the needed qualifications in a higher degree. The spread of knowledge and the greater opportunities of travel and research have rendered available to us many foreign plants that, in most cases, can more effectually serve the needs of suffering humanity or the requirements of commerce than our indigenous plants. We need only, in passing, just mention quinine and indigo as examples of this patent fact. The "happy medium" is no doubt the right view to take in this as in so many other cases, for while, on the one hand, we can scarcely appreciate the zeal with which, in the Middle Ages, almost any common plant was credited with healing virtue for nearly every ailment, it is no less true, on the other part, that in these later days the study of the economic and medicinal value of our native flora has been too much neglected. The specific name, *reptans*, is from a Latin verb, and refers to the creeping nature of the plant. The name cinquefoil, we need scarcely say, means five-leaved, and refers to the form of the leaf, composed, as it ordinarily is, of five leaflets, though, in rich soil, the leaflets are often seven in number. It is in some old herbals called the five-leaved grass, and five-fingers. The plant was formerly much used as a remedy for the ague. According to Dioscorides in a quartan ague the leaves of four stalks should be taken, in a tertian three, and in a quotidian the leaves of one. The plant was also employed for cancer, quinsy, jaundice, toothache, hoarseness,

palsy, gout, sciatica, and many other ailments. The cinquefoil has a long, trailing or creeping stem, which roots at intervals, like the runners from the strawberry plant, and enables it to take possession very rapidly of a considerable share of the hedgerow. All the leaves are on long stalks, and are coarsely serrate in outline. The flowers are borne singly on long stems, which rise from the axil of the leaves. These flower-stalks are ordinarily longer than those that bear the leaves. The cinquefoil is a perennial, and flowers from June to September. Even when not in blossom the plant is attractive from the beautiful form of the foliage. We for some time used it as a bordering in part of our garden, and a very beautiful wreath-like line of flower and leaf it made; the only objection to its use will be found in the vigour with which it throws out its long spreading stems, an energy that makes it somewhat difficult to keep it quite within due bounds. The petals of the cinquefoil are five in number ordinarily, though under special circumstances a greater number may at times be met with, in the same way that we have seen that the normal five segments of the leaf may at times be exceeded. Out of one hundred blossoms that we picked as a test, eighty had the parts of the corolla, calyx, and epicalyx in fives, while the remaining twenty were in sixes.

The tormentil, *Potentilla Tormentilla*, the second plant represented on the plate, is in its typical state sufficiently distinct from the cinquefoil, though from the occurrence from time to time of intermediate forms some botanists have been inclined to regard the two plants as really only two well-marked varieties of the one species. As these intermediate links are not commonly met with, while the

two strongly-divergent types may be found almost anywhere, we may safely, in the present pages at least, regard them as specifically distinct. In the tormentil the stem-leaves are stalkless; the flowers, though of the same colour, are ordinarily much smaller than in the cinquefoil; in the latter plant, as we have seen, the parts of the blossom are normally in fives, while in the tormentil the petals are but four in number. The stems of the tormentil are much more erect than those of the cinquefoil. The tormentil root is so astringent in character, and contains so much tannin, that it has been largely used in the place of oak-bark in tanning, and *decoctum tormentillæ* still figures as an astringent lotion in the modern pharmacopœia. Its root also yields a red dye. The plant is a perennial, and flowers from about the first or second week in May until late in the autumn. Besides the tormentil, the cinquefoil, and the silver-weed (*Potentilla anserina*)—which we have figured—there are nine other species of *Potentilla;* most of these are, however, so rare or so local in their occurrence as to be beyond the scope of our work.

TUTSAN.

TUTSAN.

Hypericum Androsæmum. Nat. Ord., Hypericaceæ.

ALTHOUGH the tutsan is not so familiar as many other plants, it is spread fairly commonly throughout Britain, being in some districts better known than in others. It may often, too, be met with in old-fashioned country gardens. Though the lovers of plants are by no means extinct, and may often transplant to their own gardens some wildling that from its beauty or rarity has attracted them, most of the old English wild plants found blossoming in the rustic flower-bed may be considered to owe their presence there to the great use of simples and herbs in olden times—a use that our grandmothers affected to a great extent when foreign drugs were with great difficulty procurable, and that still survives to a considerable degree in many rural districts, where the herb-doctor is often an old woman, and prescribes for her

neighbours and the country round, the radius varying with her repute.

The tutsan is in French called *Toute-saine*, or all-heal; and Parkinson, writing in the reign of Elizabeth, points out that it is from this that our English name is evidently derived. The common valerian (*Valeriana officinalis*) is by some old writers called all-heal, but the French *Toute-saine*, or tutsan, and the English all-heal are now equally neglected. The tutsan should be looked for in open woods, copses, and shrubberies, and it is on this account sometimes called park-leaves—a name, however, that is much less commonly given to it. In some mediæval books it is written *Tutsayne*, a still nearer approach, in sound at least, to the French. Lobel says it is so called "because, like the panacea, it cures all sicknesses and diseases." Alas! the "panacea" is rarer even than the tutsan.

The generic name is derived from two Greek words signifying superior and a spectre, as several of the plants forming the genus are supposed to protect the possessor from the power of evil spirits! The St. John's wort (*Hypericum perforatum*) was in an especial degree accredited with these supernatural powers, and was by the monkish writers called the *Fuga demonum*. The specific name, *Androsæmum*, is derived from two Greek words signifying man and blood, in allusion to the dark-red juice that is contained in the capsules, and which at once becomes apparent when they are bruised. An old fanciful name for the plant is "balm of the warrior's wound"—a name applied from the mediæval belief that plants had their healing virtues indicated in some way to the eye, the blood-red juice of the tutsan pointing out its usé as an application to wounds. Fuchs says that the name arises

from the blood-red stains left on the fingers after rubbing the flowers; while Gerarde has yet another theory to explain the name, for he says that "the leves, floures, and seeds stamped and put into a glasse with oile olive, and set in the sunne for certaine weekes, doth make an oile of the colour of blood, which is a most pretious remedy for deep wounds and those that are thorow the body." In some herbals the tutsan is called St. Peter's wort, in Germany it is *Konrad's kraut*, in Wales it is the *Creulys bendiged*, and in Ireland the *Beahnua Firion*.

The tutsan is found all along the western side of Great Britain, and it is not uncommon in the south-western counties of England; but it is more rarely found on the eastern side. We remember, however, to have found it in a hedge near Guildford; and in turning to Curtis's "Flora Londinensis," we see that he speaks of having found it in Oak of Honour Wood, near Norwood, a southern suburb of the metropolis; and in John Martin's English translation (A.D. 1732) of Tournefort's "History of Plants," he records Wimbledon, Highgate, and Muswell Hill as localities near London where he has found it. The tutsan is frequently met with in Ireland.

Lyte, in his "Niewe Herball," a translation from Dodoens, gives a quaintly graphic description of the plant. Dodoens' name was, after the fashion of the time, Latinised into Dodonæus; he was a Flemish physician, and his book achieved a great popularity at that day and is still well worth getting hold of. Lyte dedicated his labours to Queen Elizabeth:—"Tutsan is like to St. John's worte and St. Peter's grasse. It hath many rounde stalkes comming out of one roote, the which do bring forth leves, much larger than the leves of the Saint

John's wurte: in ye beginning greene, but after that the seede is ripe they ware redde, and than being brused betwixt one's fingers, they yield a redde sappe or iuyce. At the toppe of the stalkes groweth smal knoppers or round buttons, the which in their opening do bring for the floures like to St. John's grasse but greater; whan they are fallen or perished there appeareth little smal pellots or round balles, very red at the beginning, but afterward of a browne and very darke-redde colour when they be ripe, like to the colour of clotted or congeled drie bloud, in which knops or bearies is conteyned the side, which is small and browne. The roote is hard and of a wooddie substance, yearely sending forth new springs."

CORN SOW-THISTLE.

THE CORN SOW-THISTLE.

Sonchus arvensis. Nat. Ord., Compositæ.

LIKE the poppy, the corn-marigold, and the blue-bottle, the corn sow-thistle is one of the characteristic plants of cultivation, and may frequently be met with in cornfields almost throughout the whole of Britain. The plant is a perennial, and may be found in flower during August and September. Our readers will be careful to bear in mind the broad distinction between a perennial plant and what is popularly called an evergreen. The corn sow-thistle is the former, but certainly not the latter, as it is the root-stock only in this and in so many other plants that survives from year to year. Each year new shoots arise, blossom, scatter their seed, and decay, leaving no apparent trace behind them of their existence.

The present species is the *Sonchus arvensis*. The

specific name, as we have already seen in several instances, the *Convolvulus arvensis*, &c., refers to the favourite locality of the plant, and only the generic name therefore calls for any comment. The word is derived from the name bestowed on this or some similar species by the ancient Greek writers, which name was in turn, it was conjectured, derived from the Greek word for hollow, this species, like all the other members of the genus, having thick succulent stems, that, like a pipe, have a hollow space running down their centres. The name sow-thistle was bestowed on the various species of this genus because, though somewhat like a thistle, they were not really thistles after all, and such a prefix as sow, horse, or hog, is frequently in popular nomenclature put before the name to indicate that the plant is spurious and worthless. The case of the sow-thistle is a somewhat hard one, for it clearly is no more like a thistle than a thistle is like it; and it is at least as useful a plant as a thistle, and therefore deserves no such opprobrium. Pigs are particularly fond of the succulent leaves and stems of the sow-thistle, and it has therefore been suggested that the popular name in all good faith bears testimony to this liking on their part; but the analogy between this and the structure of several other old plant-names leads us to conclude that the first explanation of the name is the true one. We hope to go into this question at some little length in our remarks on the dog-rose, and to those we would now invite any who feel an interest in the question to turn later on.

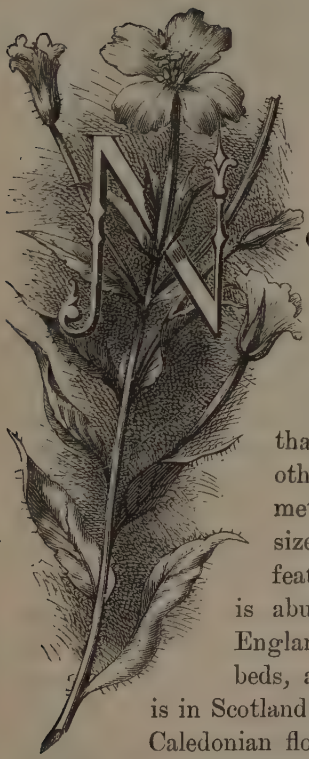
The root-stock of the corn sow-thistle is large, and creeps almost horizontally some little distance. The stems that rise from it are often three or even four feet high; the

plant, therefore, where it occurs at all, cannot well escape being seen both on account of its fine size and of the large and brilliant yellow flowers it bears. The leaves are large, and, as will be seen in our illustration, are somewhat long and narrow. The numerous lateral lobes stand boldly out from the central line, and are either at about right angles with it, or at other times point downwards towards the base of the leaf, as we see the very similar segments of the dandelion leaf do. At other times the lobes are not so clearly developed; in this case the outline of the leaf is what is termed botanically sinuate—that is to say, irregularly waved. Whatever the form of the leaf, its edges are thickly covered with small but very sharply-pointed teeth. The upper leaves of the plant are much smaller and much simpler in form than the lower. All the leaves, whatever their position on the stem, clasp it at their bases. The lower leaves are stalked, the upper spring directly from the stem. The flower-heads are very large and conspicuous, and the form of what for convenience sake we may call the bud is curiously square, a feature that is readily noticed again in the common sow-thistle, a plant figured in another of our illustrations. The so-called bud is really the involucre or mass of bracts from which the composite flower-head springs. After flowering the drum-like form is lost, the form becoming conical: this may be well seen in the illustration, just referred to, of the other species of sow-thistle figured in our series. In the present plate, with one exception, all the blossoms have yet to expand; the plant was sketched in an early stage of its flowering. The inflorescence is by some authorities said to be paniculate, by others corymbose. The nature of a corymb will be found defined in our remarks on the yarrow, a

particularly good example of the corymbose arrangement. The inflorescence is said to be racemose when, as in the hyacinth, a number of flowers supported on small stems are given off at intervals from the main stem that bears them all. If, however, these subordinate stems of the raceme branch and bear more than one blossom the result is a panicle, a term usually applied to any loose racemose inflorescence in which the stalks are irregularly elongated and branched. The inflorescence of the corn sow-thistle is certainly rather paniculate than corymbose.

The curious little glandular hairs, looking very like little pins stuck all over the stems and involucres, will not escape notice; they may also be very well seen in the *Sonchus oleraceus*, the common sow-thistle.

GREATER WILLOW-HERB.



THE GREATER WILLOW-HERB.

Epilobium hirsutum. Nat. Ord., Onagraceæ.

NO less than ten species of willow-herb are found in Britain, most of them being fairly commonly distributed. The species figured in our illustration will probably be the best known of these, not that it is commoner than any of the others, but because, while as freely met with as any of them, its large size tends to make it a conspicuous feature in the localities it favours. It is abundant over almost the whole of England by the sides of streams, in osier beds, and low-lying damp ground; but is in Scotland one of the scarcer plants of the Caledonian flora, which, in many respects, as we have seen from time to time in our descriptions of the plants before us, differs from that of England.

The greater willow-herb is the *Epilobium hirsutum* of the systematic botanist. The generic name *Epilobium* is derived from two Greek words signifying upon a pod,

no shelter. In all the other species of willow-herb the flowers are regular, all four petals being alike in form and size; but in the rose-bay they are slightly irregular, a feature that will, therefore, in itself be sufficient to identify the species. It is a doubtful native, but its root is very brittle, and as every little piece will grow it may easily get accidentally spread, while the tufted seeds of this, as of all the other species, are scattered far and wide by the passing breeze.

Other common species are the small-flowered hairy willow-herb (*E. parviflorum*), and the broad smooth-leaved willow-herb (*E. montanum*). The first of these is ordinarily found in moist situations, the second on dry banks, old walls, the thatch of cottage roofs. Both flower as summer passes into autumn. The square-stalked willow-herb (*E. tetragonum*) is frequently found in moist situations. All the willow-herbs have their blossoms of a more or less deep tint of red.

HAWTHORN.

THE HAWTHORN.

Cratægus oxyacantha. *Nat. Ord.*, *Rosaceæ.*

AMONGST the many beautiful plants of the hedgerow—the guelder-rose, with its large heads of snowy blossoms, or, later on, its crimson berries scarcely to be distinguished amongst its crimson foliage; the maple with its beautiful leaf form and its bunches of quaint fruit, or the bramble with its silky blossoms and masses of luscious fruit—the hawthorn must, we think, be fairly given pre-eminence. Its masses of white flowers, the rich fragrance they yield, and the early season at which they may be found, are all features that combine to render it a general favourite. The hawthorn is known botanically as the *Cratægus oxyacantha*. The genus, of which this species is the only British representative, only differs from *Pyrus*, the genus containing the crab-apple and pear, in some few minor points, and like that, is spread over all the temperate region of the northern

hemisphere. The plant is about equally well known under three names—hawthorn, whitethorn, or May. It owes its first name to the crimson fruit that loads it in the autumn; these berries are popularly known as "haws" or "haigs." The first name is in use in the south, the second in the north, of England. In the Anglo-Saxon chronicles the tree is the hagadorn, a name that closely resembles the modern German name for it, the hagedorn. The fruit is in Anglo-Saxon called haga; it is therefore the characteristic feature that has influenced the name of the shrub, while we indirectly learn another curious little fact—the great value of the tree even in those early times as a hedge-former—from the A.-S. word *hæge*, a hedge, the word being probably derived from the plant that had proved most valuable as a fencing, though it may either be that the hedge derives its name, as suggested, from the great use of this plant, or possibly that the plant itself, on the other hand, is called hedge-thorn, from its utility in hedge-making. Whichever view be taken, it does not affect the interesting fact of its use in the hedgerow at this early period. The name whitethorn is applied to the shrub to distinguish it from the *Prunus spinosa*, or blackthorn, though it might well be allowed to stand on its own merits as a very fairly expressive name for a thorny bush that during its flowering season is one mass of snowy-white blossoms. The third name is given to it from the time of the year when it is in full flower—it is one of the most typical and beautiful flowers of the month of May. In the names of several plants a reference to the time of their flowering may be detected. We find it, for instance, in the Christmas-rose, while by many old writers the daffodil is called the Lent-

lily; the pasque-flower is so called from its being met with about Easter, the great paschal feast.

The hawthorn, though ordinarily seen as a hedgerow plant, may at times be found as a small tree. When thus met with it is a sufficiently striking object, and altogether different from the plant that has suffered the restraint and discipline of the clipping shears. The branches are often wonderfully gnarled and twisted together, and have a look of strength and hoar antiquity that bespeaks respect. In most forests, these old hawthorns may be met with, and during the early summer the air is fragrant with the delicious odour wafted from their countless blossoms. The hawthorn will ordinarily be found fully in flower by about the middle of May, and by about the middle of June the last few blossoms will be fading.

Before the alteration of the style, the hawthorn was one of the great features of the decorations of the once famous festivities of May-day. It is very rarely now found in blossom so early, as the effect of the alteration of the style was to throw the first of May many days earlier.

Considerable variation of form may be met with in the foliage and of colour in the flowers and fruit. The leaves are stalked and divided into three or five segments; in some examples these are soft and flowing in outline, while in others the forms are very acute, the indentations very sharply defined. The flowers, though ordinarily white, may at times be found of a more or less decided pink or even crimson; whatever their colour, they are grouped in little clusters together on short leafy branches given off at frequent intervals from the stem. The form of inflorescence is that known botanically as a corymb. Near Glastonbury Abbey stands an old haw-

thorn that has been the subject of many legends, the current belief, however, being that it sprang from the staff of Joseph of Arimathea, who, it is asserted, was the first preacher of Christianity to Britain, and who, to convince the benighted islanders of his mission, thrust his staff into the ground, where it at once budded and blossomed. The tree has ever since flowered, not only at its proper season, but also at each Christmas, the anniversary of its miraculous origin. A piece that came under our notice on December 16th had eight bunches or corymbs of flowers on it, each of these was composed of from twenty to thirty blossoms and buds, about a dozen of the flowers in each corymb being fully expanded. The blossoms were a little smaller than would ordinarily be looked for, but had all the beauty and regularity of form and the characteristic hawthorn scent of the normal plant. The only thing abnormal in the appearance of the spray was the absence of the foliage. The Glastonbury thorn is not absolutely unique, some few others, as at Romney, and near Nantwich, possess the same peculiarity of flowering twice, first in May and again about the end of the year.

FLEABANE.

FLEABANE.

Pulicaria dysenterica. Nat. Ord., Compositæ.

THOUGH possibly not so attractive as many species, the golden stars of the fleabane enrich to the botanist the appearance of many a bit of poor land or moist waste, and contribute not a little to beautify spots that would be bare of blossom without them. This flower's favourite localities are wet pasture lands, the sides of ditches, and waste ground by roadsides, where good road-making has not come in and carried away the superfluous moisture. The chosen spots for such attractive plants as the lady's smock, the forget-me-not, the king-cup, have almost, or quite, lost these blossoms before the fleabane appears upon the scene: this comes at a time when there is little else to compete with it; August and September being the months in which it should be looked for. Though very generally distributed throughout England, it is one of the rarer plants of Scotland, while in Ireland it appears to be common in the south and gradually growing scarcer as

we go northward. Though its brilliant blossoms, and the profusion in which they are found where the circumstances are favourable, render the fleabane an attractive plant to those who have no particular interest in the land it enlivens by its golden rays, the farmer finds it no pleasing spectacle when it overruns large tracts of land, as it takes the place of what would be more profitable, gives the land a barren and uncultivated appearance, and rather convicts him of having been negligent in his drainage arrangements. Horses and cattle dislike it.

The root of the fleabane possesses in the eyes of the agriculturist two great drawbacks—it is perennial, and it creeps. Not only can it scarcely be dislodged from its first spot, but it declines to merely stay there, sending its creeping underground stems all around, and seizing on a larger area. From these creeping roots, stems at intervals arise, and attain to a height of from one to two feet. The stems branch a good deal, are round in section, tough and firm, solid, and, like the leaves, are more or less covered with a woolly substance. This latter varies a good deal in degree in different plants, some scarcely showing it, while others look quite hoary, and in many cases the stem is more clothed with it than the foliage. The leaves, as may be very clearly seen in our illustration, are placed alternately on the stems, and set rather closely together. They spread vigorously and boldly out, but clasp the stems almost round at their bases by their rounded lobes or auricles. The leaves themselves are of the form called by botanists oblong. Though the geometrician might object to the term, it is one well understood. The outline of the leaf is slightly notched, and the whole leaf is wavy, as may be clearly noticed in the three lower examples in our figure.

The under-surface is ordinarily more woolly than the upper and though the general effect of the foliage varies according to its greater or smaller degree of woolliness, it is at best a somewhat dull and greyish green.

The flowerheads of the fleabane are of a brilliant golden yellow, the florets in the centre or disc being somewhat darker in colour than those that are ranged around them. In some specimens these outer radiating parts are more numerous than in our illustration, and give a somewhat more compact and less ragged look to the flowerhead, but the form we have portrayed is equally characteristic of the plant, and more picturesque in itself than the other.

The fleabane was the *Inula dysenterica* of Linnæus, and it is by this name that most of the older writers—and some more recent ones, indeed—refer to it; but from details of structure into which we need not here go, a sufficient reason has been felt by Hooker and others to justify the creation of a new genus for this and one other species, and with them it is the *Pulicaria dysenterica*. The plant seems to have proved a stumbling-block to a good many who have attempted to find it a place in botanical classification. Bauhin, Gerard, and Matthiolus all call it *Conyza*, and we also find *Aster dysentericus* and *Herba dysenterica* as old names for it. As all these names carry some little history and meaning in them, we may with advantage look into their significance. *Inula* commemorates the heroine of the Trojan war, the plant having been at one time called *Helenium*, and fabled to have sprung from her tears. *Pulicaria* is from the Latin *Pulex*, the vivacious little monster that is commemorated in the first half of the English name, the powerful smell of the plant being

thought to be baneful to these small disturbers of the peace. *Conyza* is from the Greek word for dust or powder, and points again to its anti-pulicitic powers when strewn or dusted about. *Aster* signifies a star, and bears evident reference to its stellate flower-heads.

The specific title testifies to an old belief in its remedial efficacy, though this appears to have no well-founded claim. Linnæus, who bestowed the name, mentions, in his "Flora Sueccia," that he had been informed by a General Keit that the Russians in one of their expeditions against Persia were cured of dysentery by means of this plant. Two of our English plants bear the name of fleabane, but the second is ordinarily, for the sake of distinction, called the blue fleabane. It is the *Erigeron acris* of the botanist, and belongs to the same order as the subject of our present illustration: its flowerheads have a yellow centre, and are surrounded by purplish rays.

TOUCH-ME-NOT.

TOUCH-ME-NOT.

Impatiens Noli-me-tangere. Nat. Ord., Balsaminaceæ.

THOUGH some of our greater and later authorities have decided that the touch-me-not has little or no claim to be considered an indigenous species, it may very fairly, we think, claim a place in our series. A plant that has naturalised itself for many years—so many that Gerarde unhesitatingly accepts it as a native, and Hill, writing more than a hundred years ago, says distinctly that it is a British plant—may very legitimately engage our attention. The touch-me-not is called locally the quick-in-hand in some districts, while in France it is the impatiente-n'y-touchez-pas; and all these names, as we shall see presently, are very appropriately bestowed on the plant. Touch-me-not is an erect and branching plant, reaching a height of some two feet. Its stems are perfectly smooth, rather succulent, as the stems of most plants are that thrive in damp situations, and swollen at the joints. The leaves of the touch-me-not are very simple in form, what

is botanically termed ovate; it may be described as a pointed egg-shaped leaf. The leaves have toothed edges; in colour they are a rather palish green, and in texture flaccid and delicate. The plant is found in moist shady woods in the northern counties of England and Wales, and much more rarely in Scotland. Its succulent and fragile character causes it to bear removal very badly, and even for the purpose of our illustration we found ourselves obliged to bring several pieces home before we were able to make the necessary drawing, as piece after piece drooped and withered in spite of all our care. The slender flower-stem rises from the axils of the leaves—*i.e.*, the junctions of the leaves with the main stalk—and each ordinarily bears one or more specimens of two distinct forms of flowers. The large and conspicuous yellow and orange freckled blossoms are very curious in form, and composed of six gaily-coloured pieces. The spur of the calyx is a noticeable feature, and calls for observation, as a specific distinction based upon it is made between the present plant and the *Impatiens fulva*. In the first of these this spur is loosely turned back and ends in a blunt and rounded point, while in the second the same part is tightly bent back on to the calyx, and its extremity is notched. The gay flowers of the wild touch-me-not rarely ripen their seed or form any fruit at all, but on each flower-stem are generally found some one or more minute blossoms, and it is from these that the pods are produced. As the seed ripens these pods burst at the slightest touch and scatter the seed to some considerable distance, the effect being decidedly startling to one who is unaware of this peculiarity. We need, after mentioning this, scarcely explain why the plant is called Impatiens, and the name, or rather sentence,

noli-me-tangere, would be so familiar in mediæval times from its association with the pictures of our risen Lord, that it would naturally occur to the monkish herbalists. "The nature of this plant is such," to quote one of these old authors, "that if you touch but the pods when as the seed is ripe, though you do it never so gently, yet will the seed fly all abroad with violence, as disdaining to be touched, whence they usually call it noli-me-tangere. The nature of this plant is somewhat admirable, for if the seeds (as I said) be fully ripe, though you put but your hand neere them, as prefering to touch them, though you doe it not, yet will they fly out upon you, and, if you expect no such thing, perhaps make you affraid by reason of the suddennesse thereof." Its faculties as a medicine appear to have puzzled the ancients, as they seemed unable to "affirme any thing of certaintie, but rather by heare-say." Tragus presented it as a "vomitorie." Hill, in his "British Herbal," published in 1756, says that it is a powerful but dangerous medicine, and that the leaves bruised and applied to the skin will raise an inflammation.

Though the "Herbal" of Hill, from the later date of its publication, is not so quaintly curious as some of the older herbals, its hundreds of careful illustrations of plants give it a value of its own. Our edition, published in 1756, is folio. The illustration on the title-page represents "Æsculapius and Flora gathering from the lap of Nature health and pleasure," while the grand frontispiece shows us "the genius of Health receiving the tributes of Europe, Asia, Africa, and America, and delivering them to the British reader." The genius of Health is a nude and youthful figure, winged, but standing on the clouds, before

and below him stand or kneel the representatives of the four quarters of the globe—a negro of the blackest type, though not really so black, perhaps, as he is painted, for spear and shield are laid aside and on bended knee he offers his floral gifts; beside him is the red man of America, and behind are female figures typical of Europe and Asia. In the background is a group of would-be British readers, though the artist has not ventured to put them in the habiliments of every-day life. Clad in flowing togas, they reach with outstretched arms for the scroll the genius of Health advances towards them, and here, alas! the author's modesty failed him, for the scroll bears the words "British Herbal, 1756."

I. fulva, the orange touch-me-not, a plant of North America, has fully established itself, and is very commonly met with along the banks of the Wey and other Surrey streams. The flowers are smaller and of a deeper colour than in the species here figured.

BINDWEED.

THE BINDWEED.

Calystegia sepium. Nat. Ord., Convolvulaceæ.

WE have already given some details of the growth, &c., of the field convolvulus, or small bindweed, the subject of a former illustration. In the present plate we have represented the second common species of convolvulus, or bindweed. There is a third species, the sea convolvulus—the *Calystegia Soldanella* of the botanist—that is not at all rare on sandy shores. It has large rose-coloured flowers. It is, however, though common, naturally not so well known to most persons as a flower like that on the present plate, which is found in almost every copse and hedge, and on almost every piece of waste ground throughout the country. The bindweed is abundant throughout England and Ireland, but

appears to be of but local occurrence in Scotland. Like the common species already referred to, it is, in spite of its delicate beauty, a great nuisance to the farmer and gardener, as its roots are very long and fragile, while its twining stems travel in great masses for many feet over plants which, in the gardener's eyes, are of considerably higher value. The leaves of the bindweed are large, but somewhat thin and delicate in texture; like the foliage of all the species of the genus, they are found singly on the stem. From the axil of the leaf springs the peduncle, or flower-stalk; each stalk, as may be clearly seen in the illustration, bears but one blossom. The flowers are large and, from their snowy whiteness, very conspicuous. They vary at times, we are told, to a slight shade of pink; but such variation is exceedingly uncommon. The plant has been familiar to us for over a quarter of a century, and we have never found it bearing other than white blossoms of a perfectly unsullied purity. The calyx is completely hidden by the two large heart-shaped bracts that enclose it—a feature that has to some botanists suggested the name of hooded bindweed, and which has led to its being placed in a different genus to the smaller bindweed, or field convolvulus. This latter, we have seen, is the *Convolvulus arvensis*, while the plant we now illustrate is, botanically, the *Calystegia sepium*—the generic name being derived from two Greek words signifying "beautiful covering"—a name bestowed on the plant from these large bracteal envelopes of the true calyx which is within them. The plant is by many old writers called the hedge-bell, a descriptive and appropriate name; it is often, too, in the works of these authors called the withwind, a name still in use in many country districts, and which refers to the lightness of its large

graceful flowers as they wave on their long stems at every breeze. The specific name merely refers to one of its favourite spots of growth, being derived from the Latin word for hedge.

During a recent examination of some students in botany, the meaning of this specific title came into question. One candidate boldly asserted in his paper that it meant seven; while another, recalling to his mind the pure white of the blossoms, thought he saw therein the clue to the mystery, declaring that it was a freak of the botanists, *sepium* being evidently derived from sepia, a dark brown colour approaching black. The botanists are, however, in this case, honourably acquitted of endeavouring to trifle with our feelings by such ponderous joking, *sepes*, a hedge, being, as we have seen, the root from which the word is derived.

The order to which the plant belongs contains many beautiful and useful species. The plants that figure in the seedsman's catalogues as the *Convolvulus major* and the *Convolvulus minor* and that are such very popular flowers in most gardens, may very well be instanced as examples of the beauty of the plants of the order; while many of the tropical species produce drugs of great medicinal value. The *C. major* is, according to the more rigid nomenclature of the botanist, the *Ipomæa purpurea*. Like all the other species, its blossoms expand beneath the life-giving rays of the sun, and remain closed when its beams are withheld. The plant is widely spread over a large area of the tropical and sub-tropical regions, and thrives well even in these northern latitudes. The smaller garden convolvulus, which with its deep blue flowers makes so gay a show in the garden, is found in a wild

state so near us as the south of Europe, for it is a plant of the Mediterranean flora.

The *Ipomæa purga* supplies the jalap of the medical prescriptions. Though a native of Mexico, the plant is freely grown out of doors, both on the continent of Europe and in the garden of the Society of Apothecaries in England. Like the small bindweed, its peduncles are two-flowered; and of these one expands before the other. The corolla is crimson in colour. The root of the plant is the part of officinal value.

Scammony, another drug in the *Materia Medica*, is a gummy or resinous exudation from the roots of the *Convolvulus scammonia*, a species having its flowers of a very delicate tint of sulphur yellow. Several other species yield useful products.

HOP TREFOIL.

HOP TREFOIL.

Trifolium procumbens. Nat. Ord., Leguminosæ.

THERE are so many different species of trefoil, and so many of them have so strong a similarity, that their identification is somewhat difficult to those who have not specially studied them, but though many of the species have clustering and yellow blossoms, the resemblance of the flower-heads of the present species to little hops is a sufficiently distinctive and striking characteristic—a feature that, of course, gains for it its name of hop trefoil. The Welsh name for the plant is *Meillionen hoppysaidd*. This accidental resemblance in part to another plant procured for the hop trefoil the name at one time of the *Lupulus sylvaticus;* we find it thus named, for instance, in Parkinson's "Theatrum Botanicum" and other books of that period. Now the modern scientific name for the hop is the *Humulus lupulus,* and the first name is from the Latin word *humus,* soil or ground. Many of the plant-names were bestowed by early botanists, whose

reasons for assigning them to the various plants are now unknown, and the reasons that induced Linnæus thus to associate the hop with the soil are not forthcoming. Some writers suggest that the name is somewhat figurative, and refers to the feeble habit of the plant; this is a very unsatisfactory explanation, as the hop is a strong and vigorous plant, as any one can testify who has watched the rapidity with which it grows over a hedge or upon any support. Another theory is that the hop, if *not* supported, would grow and trail on the ground; this would-be explanation is too feeble to need any comment. The best explanation, perhaps, is that the hop is so-called from the rich soil or mould it requires; but this is, after all, only the best explanation out of a very poor choice, and it largely shares the unsatisfactory nature of the others. *Lupulus* is, we fear, equally unsatisfactory; it is derived from the Latin word *lupus*, a wolf. Pliny calls the hop *Lupus salictarius*, or willow-wolf, and it is suggested that it derived this name from the tenacity with which it clung to the willow and the injury it caused it. The hop has certainly no special preference for the willow. Probably we have lost sight of some ancient legend or other that would help us to an understanding of the name.

The root of the hop trefoil is small, somewhat fibrous and branching. Running stalks, some eight or nine inches in length, spring from the base of the stem and spread themselves freely all round. They are generally somewhat weak and procumbent in habit, but at other times are nearly erect. The central stems are ordinarily the most upright; as a rule all the stems are slightly clothed with downy hair, and they are often reddish

in tint, and especially near their bases. At the points where the leaves are given off we find the oval and pointed stipules growing in pairs. The leaves are composed of three leaflets; hence the name *trifolium* applied to the genus, that word being Latin in its origin, and signifying three-leaved. Each leaflet is broadly heart-shaped, the central one being on a longer stalk than the others, and removed to a little distance from them. The margins are finely toothed, the lateral veins very straight-lined, and parallel, and conspicuous. The leaf-stalks are ordinarily shorter than the leaves themselves, thus offering a marked contrast to those of the *T. repens.* or Dutch clover, and most of the other species of the genus. The flower-heads are borne on long and naked stalks, that spring from the axils of leaves, and are much longer than those bearing the leaves. The flower-heads are loosely globular or ovoid in form, and each contain some thirty or forty blossoms. These, a bright golden yellow in tint, stand on very short stalks, so short that they are not visible without pulling the flower-head to pieces. The various flowers lie closely together, and give the head the compact and hop-like character. After flowering, the upper portion of the pea-like flower droops down over the rest, and the golden yellow tint is exchanged for a pale warm brown or fawn colour. We may in many of the flower-heads thus trace the progress of decay, a few blossoms of the globular mass being brown, and the rest still of a pure yellow tint. Beneath these drooping standards of the flowers, and concealed by them, may be found the ripening pods. The blossoms are of the usual pea-flower type. A conspicuous standard stands nearly erect; the wings are smaller than this, and the keel is very small indeed, and contained within the wings.

The standard after flowering continues to increase in size, and falls over in the way we have just mentioned. The calyx is very minute in size, membraneous in texture, yellowish in tint, and terminating in fine teeth, the upper two of which are shorter than the others. Each pod is found to contain a single shining and reddish-brown seed.

The hop trefoil is ordinarily to be found preferring rather dry situations, such as railway embankments, roadside slopes, dry pastures, open downs, and the like, and in such situations is abundant almost everywhere. Its blossoms may be found from the middle of June to the end of August. Though a detached portion, such as we are obliged to figure, suggests the idea of a somewhat insignificant flower, one that might readily be overlooked, this result is not practically likely to happen, for the plant has a way of spreading that makes it in the mass sufficiently striking, and when we come across some yards of it on a dry and gravelly bank there is no fear of its being overlooked.

WOOD SORREL.

THE WOOD SORREL.

Oxalis acetosella. Nat. Ord., Oxalidaceæ.

THE subject of our present illustration is one of the typical flowers of the woods, and is so freely distributed that our readers should have little or no difficulty in finding specimens for themselves. It may also be found in mountain districts sheltering in crevices of the rocks. It flowers during April and May. The love of the plant for damp and shade naturally makes it a dweller in the woods, its most typical *habitat*, and those who would transfer it to their gardens must not fail to observe these essential conditions of success. We have seen the plant grow in a Wardian case, its delicate beauty rendering it a very acceptable addition.

The root-stock of the wood-sorrel is perennial, creeping, and covered with bright red scales, and from this all the leaves at once ascend. These leaves are borne on long and slender stalks, and each leaf is composed of three heart-shaped leaflets, a delicate yellowish green on the upper

surface, and ordinarily a rather dark purple beneath. These leaflets droop at night or on the approach of wet weather. The flowers are pure white and delicately streaked with purplish-pink veins. Curtis, in his "Flora Londinensis," says, "It is said to vary with bluish and purple-coloured blossoms," while Gerarde mentions some pink specimens that had been sent to him, but such variations from the type are very rarely encountered. Each flower consists of five equal and similar petals, forming at their period of fullest expansion a deeply cup-like corolla. The sepals, too, are five in number, small, and bluntly terminated. The ten stamens are arranged in two rings, the five opposite the petals being larger than the other and alternating five. The flowers are more or less pendulous on the light flower-stalks that support them. These flower-stalks are about the same length as those of the leaves, and each carries a single blossom; about half-way up two small bracts will be noticed on each stem. When the seed-vessels are ripe, a gentle pressure will cause them to open at their angles, and discharge their seeds to some considerable distance.

A very agreeable acid flavour is perceived on tasting the leaves, and it is to this feature that the plant owes both its commonest name and its generic and specific appellations. Sorrel is derived from the same root as the word sour, and in France the plant from the same reason is the *surelle*, while the generic name *oxalis* is Greek in its origin, and signifies the same thing, sour or acid. *Acetosella* is from the Latin *acetum*, vinegar. The plant is by some of the older writers called wood-sour or sour-trefoil. The essential salt, oxalic acid, extracted from it by crystallisation, is largely employed in taking out iron-mould and ink

spots from linen, twenty pounds of sorrel-leaves yielding between two and three ounces of the salt. A conserve of the leaves was also for a long time a very favourite remedy in malignant fevers, in scurvy, and in all ailments suggesting the use of a cooling and acid drink. Gerarde recommends it highly as making a "better greene sauce than any other herbe whatsoever," and also in that it "cooleth mightily an hot pestilentiall fever, especially being made in a syrrup with sugar."

The wood-sorrel bears many other names. It is with some old herbalists the three-leaved grass, grass being a very general term indeed in mediæval days. It is also the cuckoo-sorrel, *panis cuculi*, or "cuckow's meate," from an old belief that the bird in question cleared his voice by its agency. In Scotland it is gowke-meat, in Wales *suran y coed gyffredin*, and in Ireland the *seamsog*. We have already given one French name for it: a second is *pain du coucou*. In Italy it is the *Iuliola*. A very common English name for the wood-sorrel, though it is rarely used now, is the stub-wort, the plant growing abundantly amongst the "stubs" and roots of trees, and so getting its name. Another familiar mediæval name was the Hallelujah. Many of our readers will no doubt be familiar with the legend that St. Patrick, unable to make his savage auditory at all comprehend the doctrine of a Triune Deity, saw at his feet the leaf of the wood-sorrel, and made its familiar form a symbol of the truth he would fain impress upon them, and that henceforth the plant became dedicated to that saint. The monkish name Hallelujah would appear, however, to have been no song of joy and victory over converted pagans; it has been suggested that it derived

its force rather from the fact that the wood-sorrel was blossoming between Easter and Whitsuntide, when the psalms of rejoicing were sung. The plant occurs not uncommonly in old ecclesiastical decorations; there is a very good glass quarry, based on its drooping leaves and buds, in King's College, Cambridge; and Fra Angelico and other early painters introduced it. "The triple leaf of this plant and white flower stained purple probably gave it strange typical interest among the Christian painters."* Considerable diversity of opinion exists as to what plant may be deemed the true shamrock of Erin. Into the various arguments for and against the clover, the present plant, and others, we have not here space to go, but the balance would appear to be in favour of the present plant. It is in full flower on the 17th of March (St. Patrick's Day), and in a book written about 1603 we find the passage, "They willingly eat the herb shamrock, being of a sharp taste."

* Ruskin.

YELLOW RATTLE.

THE YELLOW RATTLE.

Rhinanthus Crista-galli. Nat. Ord., Scrophulariaceæ.

THE yellow rattle of England—the *Cribell melyn* of Wales and the *Bodan chloigin* of Ireland—"groweth in drie medowes and pastures, and is to them a great annoiance." The reason of this annoyance does not seem to have been understood until some few years ago, when it was observed that the plant is a parasite, attaching itself to the roots of the grass and other herbage surrounding it by means of small suckers. The broomrape and the dodder are other common examples of parasitic plants. The broomrapes are equally curious, and plant themselves, according to the species, on broom, furze, thyme, knapweed, milfoil, and other plants; but as we propose to figure one of the common species, we reserve our fuller comments until then.

Botanical writers until comparatively recently affirmed

that we had three species of yellow rattle in Britain, basing specific differences on the size of the flowers, the comparative width of the leaves, and other minor points; but further observation has proved that these characteristics are by no means constant, and that plants showing all the necessary gradations of form required to link one reputed species with another may be readily found. Such great modern authorities as Hooker and Bentham agree in considering that all these supposed species should be re-united, and deemed one.

The yellow rattle is an annual, and ordinarily begins flowering early in June. It generally falls before the mower's scythe, as it is a plant of the meadows and pastures. Linnæus tells us that the Swedes considered that when the plant had done flowering, and was ripening its seeds, was the fit time to begin mowing and gathering in the hay crop; but with us the grass is cut earlier, while the plant is still in flower. It is ordinarily a sign of indifferent pasture, and tends to make matters worse, for it comes, in the first place, because the herbage is poor, while the herbage is the poorer for its coming. Martyn introduces the plant in his "Flora Rustica," a volume supposed to be devoted to the plants useful to the agriculturalist, but finds it very difficult to say a good word for it. He says that "horses, sheep, and goats are said to eat it, and kine to refuse it. Others affirm that cattle in general at liberty refuse it, but that they will eat it when fresh, but reject it when dry among hay." This, it will be seen, is at best but dubious, and a plant that under some circumstances is refused, and in others rejected, would not appear to have any great value; we may, therefore, very legitimately join in the general denunciation of the plant, handsome as it is.

The yellow rattle grows to the height of about a foot, the

stalk being erect, and either simple or very slightly branched, square in section, smooth in surface, and more or less spotted with purple. The leaves are opposite to each other, each pair being at right angles to those immediately above and below it, and often separated from them by a considerable space of bare stalk. The leaves are sessile or stalkless, heart-shaped at base, in form somewhat like a wedge. The veins are conspicuous, and the edges of the leaves are deeply notched or serrated, and often slightly turning. The floral leaves are broader in proportion to their length than those lower on the stem, and the flowers spring from the axils of these upper or bracteal leaves. The flowers are on very short foot-stalks. The calyx, even in the early stages of the flowering, is large and conspicuous, very inflated, and flattened so that its side view is much larger than its edge view, terminating in four equal teeth, and contracting at the mouth, a rare pale green in colour. The corolla is in one piece, or monopetalous. The upper part, or lip, is very convex; the lower lip divided into three segments, the middle or lowest one being also the largest. The upper lip ordinarily has a purple spot or blotch upon it. The stamens rest closely under the upper lip, two of them being on shorter filaments than the other two. The anthers are curious, as they are covered with little bristly hairs. The seed-vessel is a capsule, orbicular, but flattened in one direction. It contains several rather large and flat seeds. These seeds when ripe rattle in the dry capsule, and give the plant its familiar name of yellow rattle. Culpepper and some other old writers call the plant the rattle-grass, and amongst the names given as current in Gerarde's time we find the penny-grass—grass being in olden times a sort of generic title for almost all sorts of

low-growing herbage. The pennies were the capsules, flattened, and yet fairly circular in outline; the resemblance to money is not very great certainly, but in the "good old times" men do not appear to have been very exacting on such points. The generic name, *Rhinanthus*, is derived from the two Greek words signifying nose and flower, the projecting beak of the upper portion of the corolla being the part that suggested the name, and it is only fair to say that in some other plants in the genus the resemblance is more pronounced. The specific name, *Crista-galli*, means the crest or comb of a cock, because, according to Pliny, it has numerous leaves, resembling a cock's comb. Others prefer to see in the notched calyx a resemblance which they deny to the serrated leaves. In France it is the *Créte-de-coq*. Parkinson, writing in 1640, calls it the yellow rattle or coxcombe, and distinctly says that the deeply-dented edges of the leaves "resemble therein the crest or combe of a cocke;" and yet farther on he says that some call it gallinacea, "because the floweres, as some think, stand like a cocke's combe at the toppes of the stalkes."

PRINTED BY CASSELL & COMPANY, LIMITED, LA BELLE SAUVAGE, LONDON, E.C.

BUGLE AND TALL FESCUE GRASS.

FAMILIAR

WILD FLOWERS

FIGURED AND DESCRIBED BY

F. EDWARD HULME, F.L.S., F.S.A.

"Nature is but a name for an effect,
Whose cause is God. Not a flower
But shows some touch, in freckle, streak, or stain,
Of his unrivalled pencil. He inspires
Their balmy odours, and imparts their hues,
And bathes their eyes with nectar, and includes,
In grains as countless as the seaside sands,
The forms with which He sprinkles all the earth."

COWPER

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SUMMARY.

It should be prefaced that this Summary merely professes to give a brief epitome of each of the plants represented in this volume, and that it is principally a condensation from the writings of Hooker, Lindley, Bentham, and other authorities on the subject.*

BUGLE, *AJUGA REPTANS. Nat. Ord., Labiatæ.*—Calyx ovoid, five-cleft, ciliate, nearly equal. Corolla irregular, upper lip very small, lower lip long and spreading, tubed, dull purple. Stamens four, projecting beyond upper lip, two lower the longest. Inflorescence whorled in axils of upper leaves. Flowering stem erect, with opposite leaves, ovate or obovate, nearly sessile, the upper ones coloured; the lower leaves on footstalks, small, spatulate. Rootstock throws out creeping scions.—Woods and moist meadows. May, June. Perennial. *p.* 1.

IVY-LEAVED TOAD-FLAX, *LINARIA CYMBALARIA. Nat. Ord., Scrophulariaceæ.*—Calyx persistent, five-cleft. Corolla monopetalous, irregular, deciduous, spurred at base, closed by palate. Flowers small, borne on axillary peduncles. Stamens four, didynamous. Style one; stigma two-lobed. Capsule two-celled, globular. Leaves on long stalks, five-lobed, fleshy; veins obscure, often purple on under-surface. Stems long, filiform, trailing.—Rocks and old walls, preferably in damp situations. May, June, July, August, September, October. Perennial. *p.* 5

SPEAR-PLUME THISTLE, *CARDUUS (OR CNICUS) LANCEOLATUS. Nat. Ord., Compositæ.*—All the corollas tubular, five-left, homogamous; purple. Stamens five, syngenesious anthers. Ovary one. Style one, sheathed by tube of anthers, branched; stigmas in rows on the style branches. Receptacle bristly. Achenes compressed, glabrous. Pappus plumose, sessile, equal. Involucre

* See Prefatory Note to the Summary, Series I.

imbricated, ovate, scales spreading, prickly. Leaves decurrent, pinnatifid, short lateral lobes and longer terminal, all ending in stiff prickle; under surface grey and cottony. Flower-heads few, standing singly, conspicuous. Stem tall, stout, winged, prickly.—Waysides, hedges, pastures. July, August, September. Biennial. *p.* 9.

MARSH MARIGOLD, *CALTHA PALUSTRIS. Nat. Ord. Ranunculaceæ.*—Sepals ordinarily five, deep yellow, petaloid. Petals wanting. Stamens numerous. Follicles numerous, many-seeded. Stems thick, rooting at lower nodes, branched, erect or sub-erect. Petioles with stipule-like members at the base. Leaves chiefly radical, cordate orbicular, reniform, crenate. Flowers terminal. A very variable plant.—Marshy ground, sides of water-courses. March, April, May. Perennial. *p.* 13.

DAISY, *BELLIS PERENNIS. Nat. Ord., Compositæ.*—Florets of the disk yellow; florets of the ray white, often more or less tinged with red. Involucre hemispherical, bracts equal, a single row, herbaceous. Ray-flowers female, ligulate; disk-flowers bi-sexual, tubular. Peduncles, bearing single flower-heads, leafless, radical. Receptacle conical, pappus wanting. Leaves, all springing from the root, obvate, spatulate, coarsely toothed, petiolate.—Perennial. Meadows and banks. Flowering almost the whole year round, but most freely in the early summer. *p.* 13.

AGRIMONY, *AGRIMONIA EUPATORIA. Nat. Ord., Rosaceæ.*—Calyx furrowed, turbinate, hard, covered at top with hooked and rigid hairs; cleft into five. Corolla of five yellow petals inserted on calyx. Inflorescence a spike, a three-cleft bract at the base of each calyx; after flowering, calyx is turned downwards, and becomes more bristly. Stamens few. Style two-cleft. Stem erect, slightly branched, clothed with soft hairs. Leaves interruptedly pinnate, deeply serrate; upper leaves having fewer and smaller leaflets than the lower; harsh in texture, hairy.—Roadsides and waste places. June, July. Perennial. *p.* 17.

BIRD'S-FOOT TREFOIL, *LOTUS CORNICULATUS. Nat. Ord., Leguminosæ.*—Calyx five-toothed. Corolla papilionaceous; yellow. Inflorescence umbellate, five to ten flowers on long peduncle. Leaf at base of umbel. Stamens diadelphous. Ovary one-celled. Style one;

stigma one. Legume straight, cylindrical, bearing several seeds. Leaves obvate, trifoliate; leafy stipules. Stem slender and herbaceous. Long taproot.—Pastures and hedgerows. July, August. Perennial. *p.* 21.

WHITE CAMPION, *LYCHNIS VESPERTINA. Nat Ord., Caryophyllaceæ.*—Calyx five-toothed, in anther-producing flowers cylindrical, in female flowers ovate, monophyllous. Corolla of five petals, clawed, each petal cleft, white. Flowers few, large, usually dicœcious, arranged in a loose panicle, open in the evening, fragrant. Stamens ten. Styles five. Ovary one-celled. Capsule ovoid, with ten teeth. Stem two feet high, pubescent, brittle, and somewhat viscid at the joints. Leaves oval, pointed, tapering, hairy, opposite, exstipulate, entire, sessile; the lower ones on stalks.—Hedgerows and fields. June, July, August. Biennial. *p.* 25.

DAFFODIL, *NARCISSUS PSEUDO-NARCISSUS. Nat. Ord., Amaryllidaceæ.*—Perianth tubular, having six spreading ovate or oblong segments as long as the tube, the crown broadly tubular, its edge irregular, cut, and waved; the segments pale yellow, the crown or nectary golden yellow. Stamens springing from the sides of the tube Pedicel short, springing from a membranous spathe. Flower solitary. Ovary three-angled, three-celled. Style filiform; stigma three-lobed. Fruit a capsule, terbinate. Leaves, two or three, linear, dark green, glossy, fleshy, radical, not so long as the flower-stems. Root bulbous. —Moist woods and copses. March, April. Perennial. *p.* 29.

BROOKLIME, *VERONICA BECCABUNGA. Nat. Ord., Scrophulariaceæ.*—Calyx four-cleft. Corolla monopetalous, four-cleft, rotate, the lower segment much narrower than the others, tube very short, fugacious; bright blue. Stamens two. Stigma two-lobed. Capsule two-celled, shorter than calyx, notched at summit. Inflorescence axillary, racemose. Leaves ovate, subserrate, thick, glossy, stalked. Stems thick, succulent, rooting at the joints, procumbent; flowering stems ascending. The whole plant glabrous.—Water-courses. May, June, July, August, September. Perennial. *p.* 33.

TUFTED VETCH, *VICIA CRACCA. Nat. Ord., Leguminosæ.*—Calyx gibbous at base, five-toothed, Corolla papilionaceous. Flowers

thickly clustering, racemose, on long peduncles. Stamens ten, diadelphous, nine being in one bundle and the tenth, the upper one, distinct. Style, with a tuft of hair below stigma. Pod flattened, containing some seven or eight seeds. Leaves pinnate, ending in tendril; leaflets numerous, stipulate. Stems weak, climbing.—Thickets and hedgerows. June, July, August. Perennial. *p.* 37.

LADY'S SMOCK, or BITTER-CRESS, *CARDAMINE PRATENSIS. Nat. Ord., Cruciferæ.*—Calyx equal at base, four sepals. Petals four, clawed, obovate, pale lilac, large, spreading. Stamens, half as long as petals, six, two shorter than the others, and alternate with petals, the others in pairs. Ovary and style one. Stigma capitate; style short. Inflorescence racemose. Fruit a linear pod. Stems one foot high, stiff and upright. Root-leaves pinnate, the leaflets ovate, the terminal, the largest, petiolate; the stem-leaves alternate, pinnate, sub-sessile, the leaflets long and narrow. Rootstock stoloniferous, perennial. April, May. Moist meadows. *p.* 41.

WALLFLOWER, *CHEIRANTHUS CHEIRI. Nat. Ord. Cruciferæ.*—Calyx erect, bisaccate, of four sepals. Corolla of four petals, large, varying in colour, fragrant. Stamens six in number, two shorter than the other four. Style and ovary one. Stigma two-lobed. Fruit, a flattened, two-celled pod, two to three inches in length. Leaves alternate, lanceolate, entire, acute, slightly hairy. Stems erect, woody, forking.—Old walls, ruined buildings, rocks. May and June. Perennial. *p.* 45.

YELLOW HORNED-POPPY, *GLAUCIUM LUTEUM. Nat. Ord. Papaveraceæ.*—Calyx of two sepals, concave. Petals four, one pair larger than the other, very fugacious, crumpled in bud, bright yellow. Stamens numerous; the filaments slender; anthers erect. Stigma sessile, two-lobed. Fruit a pod, ten to twelve inches long. Leaves thick, the lower ones stalked and pinnately lobed, rough, the upper ones shorter, broader, less divided, sinuate, semi-amplexicaul. Stems two feet high, much branched; the whole plant glaucous.—Sandy sea-shore.—June, July, August, September. Annual. *p.* 49.

SHEPHERD'S NEEDLE, *SCANDIX PECTEN. Nat. Ord., Umbelliferæ.*—Calyx adherent, teeth obsolete. Corolla of five unequal

petals ; petals obovate, with inflected points ; white, minute. Stamens five. Styles two. Carpels two, with five obtuse ribs. Universal involucre wanting, or represented by a single leaf. Partial involucre of several leaves. Umbels of only two or three rays, terminal or springing from axils of upper leaves. Fruit ribbed, oblong, linear, with very long beak. Leaves alternate, triply pinnate, embracing the stem with their sheathing bases.—Fields. June, July, August, September. Annual . *p.* 53.

RED MEADOW CLOVER, *TRIFOLIUM PRATENSE. Nat. Ord., Leguminosæ.*—Calyx hairy, of five unequal teeth, the lowest being the largest. Petals papilionaceous, reddish purple, turning brown after flowering. Fowers sessile, fragrant, in dense ovoid terminal heads, with two sessile, trifoliate leaves beneath them. Stamens ten, diadelphous. Style simple. Ovary one-celled. Legumes few-seeded. Leaves alternate, trifoliate, each leaflet often marked with a white lunulate spot; the leaflets obovate or obcordate, serrate. Stipules, large. Stalk erect, hairy.—Meadows, roadsides. May, June, July, August, September. Perennial. *p.* 57.

ANEMONE, *ANEMONE NEMOROSA. Nat. Ord., Ranunculaceæ.* —Calyx petaloid, white, often pink or purple beneath, glabrous, of five to nine oval sepals. Corolla wanting. Stamens and styles indefinite. Fruit an achene, horned. Flower-stem bearing single flower at its summit, and having a single ring of three involucral tri-partite serrate leaves. Radical leaves of similar character. Root-stock horizontal, black.—Woods and sheltered hedgerows. March, April, May. Perennial. *p.* 61.

GERMANDER SPEEDWELL, *VERONICA CHAMÆDRYS. Nat. Ord., Scrophulariaceæ.*—Calyx four-cleft. Corolla monopetalous, irregular, four-cleft, lower segment much narrower than the others, bright blue. Style capillary. Stamens two. Capsule two-celled, ciliate. Inflorescence a raceme, many-flowered, axillary, one only from each pair of leaves. Bracts linear. Leaves in pairs, nearly sessile, ovate, serrate, hairy, wrinkled.—Hedge-banks, woods. May, June. Perennial. *p.* 65.

GARLIC MUSTARD, *ALLIARIA OFFICINALIS. Nat. Ord., Cruciferæ.*—Calyx of four ovate, lanceolate, connivent sepals. Corolla

cruciform. Petals four, white, obovate. Stamens tetradynamous. Ovary long, tetragonal, with capitate stigma. Fruit a pod, slender, prominently nerved, two-valved, two-celled. Flowers forming a terminal raceme of corymbose character. Leaves cordate, alternate, unequally serrate, sinuate, glabrous, having a powerful odour when rubbed. Stem erect, slightly branching, cylindrical, smooth.—Hedgerows, waste ground. May, June. Annual or biennial. *p.* 69.

BLACK BRYONY, *TAMUS COMMUNIS. Nat. Ord., Dioscoreaceæ.*—Perianth regular, six deeply-cut segments, green. Dicœcious. Stamens six, springing from base of perianth, free. Ovary three-celled. Styles three; stigmas lobed. Fruit a berry, scarlet. Inflorescence of male flowers, a slender and branched raceme; of female flower, a short and close raceme. Leaves large, very glossy, cordate, entire. Stems long and twining. Rootstock very large, acrid, externally black, ovoid.—Hedges and copses. May, June, July. Perennial. *p.* 73.

CROSS-LEAVED HEATH, *ERICA TETRALIX. Nat. Ord., Ericaceæ.*—Calyx of four leaves, hairy. Corolla monopetalous, ovate, the mouth divided into four reflexed segments, marcescent, rose-coloured, drooping. Flowers umbellate-capitate, all inclined one way. Stamens eight. Anthers purple, closing together in a ring, awned at base. Style filiform. Seed-vessel capsular, four-valved, four-celled. Leaves in rings of fours, linear, ciliate, revolute at margins. Stalk shrubby, freely branching, wiry, rough.—Heaths and moorlands. July, August. Perennial. *p.* 77.

BLACKTHORN, *PRUNUS COMMUNIS. Nat. Ord., Rosaceæ.*—Calyx inferior, deciduous, five-lobed. Flowers of five petals, equal, small, white; nearly stalkless, appearing in early spring before the leaves develop. Stamens perigynous, numerous. Style one. Carpel one. Anthers conspicuous, two-celled. Fruit globular, black, with purplish bloom, very astringent to taste. Leaves alternate, stipulate, ovate, stalked, serrate. Stem much branched. Stipules free, in pairs. A small tree.—Hedges, copses, woods. Flowering in April. Perennial. *p.* 81.

HOUND'S-TONGUE, *CYNOGLOSSUM OFFICINALE. Nat. Ord., Boraginaceæ.*—Calyx inferior, deeply five-cleft, segments erect. Corolla

funnel-shaped, dull crimson; tube short, thick, purple-spotted; limb concave, five-parted, almost closed at mouth by five prominent scales. Stamens five, inserted into tube. Ovary smooth, depressed, four parted. Style pyramidal, having capitate stigma. Fruit of four globose nutlets. Flowers on short peduncles, in axillary and terminal, unilateral, drooping racemes. Leaves numerous, alternate, waved, soft, lower ones broadly lanceolate, on long footstalks, upper ones lanceolate, sessile, whole plant with strong mousy odour. Stem thick, erect, branching, leafy.—Waste grounds and open spaces in woods. June, July. Biennial. *p.* 85.

CARROT, *DAUCUS CAROTA. Nat. Ord., Umbelliferæ.*—Calyx of five small teeth. Corolla of five obcordate petals, having their points inflexed, outer one deeply bifid. Stamens five, on spreading filiform filaments. Ovary inferior, ovate. Style filiform. Flowers in large terminal umbels of many rays, flat-topped when the flowers are expanded, and become concave as the fruit ripens. Leaves bi- and tripinnate, deep green. Stem erect, furrowed, hairy, branching. Involucral ring of numerous pinnatifid leaves. Fruit clothed with prickles. Root fusiform, yellowish, of strong odour.—Borders of fields, hedge-banks, road-sides. June, July, August. Biennial. *p.* 89.

CORN-MINT, *MENTHA ARVENSIS. Nat. Ord., Labiatæ.*—Calyx tubular, campanulate, equal, five-toothed. Corolla monopetalous, hypogynous, tubular, nearly regular, four-cleft. Stamens four, diverging. Ovary one, deeply lobed. Style arising from between lobes. Stigma two-lobed. Flowers in dense axillary whorls. Achenes four, within calyx. Leaves opposite, stalked, ovate, serrate, hairy. Stem square.—Cornfields. July, August, September. Perennial. *p.* 93.

FIELD SCORPION-GRASS, *MYOSOTIS ARVENSIS. Nat. Ord., Boragineæ.* Calyx five-cleft, hairy, segments erect, persistent. Corolla hypogynous, regular, salver-shaped, monopetalous, five-lobed, pale blue. Stamens five, inserted in calyx. Ovary four-lobed. Style simple. Fruit composed of four dry, smooth, seed-like nuts. Leaves exstipulate, alternate, simple, entire, hairy. Inflorescence in unilateral racemes, ebracteate, rolled back when young.—Edges of woods, on banks, and on cultivated ground. June, July, August. Annual or biennial. *p.* 97.

LADY'S MANTLE, *ALCHEMILLA VULGARIS. Nat. Ord., Rosaceæ.*—Flowers small, very numerous, pale green, in lax corymbs at the summits of the stems and lateral branches. Perianth inferior, monophyllous, having eight-parted limb, the four inner segments being the largest. Stamens four, inserted into perianth. Ovary one, having short style surmounted with capitate stigma. Fruit a one-seeded achene. Leaves alternate, radicals large, on long stems, caulines small, on small stems, orbicular or reniform, plaited, several strongly-serrated lobes, veiny. Stipules large, connate, serrate, spreading. Stems numerous, erect, slender, cylindrical, leafy.—Pastures, fields, and hedgerows. June, July, August. Perennial. *p.* 101.

GROUNDSEL, *SENECIO VULGARIS. Nat. Ord., Compositæ.*—Flower-heads almost sessile, in close terminal corymbose clusters. Involucres cylindrical, having numerous equal linear bracts, at base other smaller ones. Florets of the ray wanting, tubular florets yellow. Stamens five, anthers syngenesious. Style scarcely longer than corolla. Ovary one. Achenes with pilose pappus. Leaves pinnatifid, with irregularly-toothed lobes. Stem erect, succulent, branching. *p.* 105.

HENBIT, *LAMIUM AMPLEXICAULE. Nat. Ord., Labiatæ.*—Calyx campanulate, five-toothed, hairy, nearly regular. Corolla rose-colour, throat of tube inflated, conspicuous two-lobed and spotted lip, upper lip entire, arched. Stamens four, two longer than the other two. Anthers hairy. Ovary with four lobes. Style single, cleft, with two stigmas. Fruit an achene, enclosed in calyx. Leaves opposite, lower ones borne on long stalks, upper ones sessile, all deeply crenate and orbicular. Flowers in compact whorls at summit of stems. Stems quadrangular, much branched.—Fields and waste ground, especially in light and sandy ground. April to August. Annual. *p.* 109.

DWARF THISTLE, *CNICUS ACAULIS. Nat. Ord., Compositæ.*—Flower-heads large, purple, ordinarily sessile, few in number, ordinarily solitary. All the corollas tubular, five-cleft. Stamens five. Ovary one. Style one. Pappus plumose, equal, long. Fruit an achene. Involucre obovate, glabrous, scales appressed. Leaves in spreading tuft, pinnatifid, glabrous, very spiny. Stem wanting or

very short.—Gravelly and chalky waste land and pasturage. July, August, September. Perennial. *p.* 113.

STARWORT, *ASTER TRIPOLIUM. Nat. Ord., Compositæ.*—Flower-heads in terminal corymbs. Involucre of a few imbricated bracts. Ray florets purple, ligulate, sometimes wanting; disk florets yellow, tubular. Leaves linear-lanceolate, entire, alternate, obscurely three-nerved, slightly succulent, exstipulate. Stem erect, glabrous, somewhat branching in the upper part.—Salt marshes. August, September. Perennial. *p.* 117.

BEE ORCHIS, *OPHRYS APIFERA. Nat. Ord., Orchidaceæ.*—Sepals ovate, very spreading, pale green or white with pink tinge. Petal small, lip broad, convex, tumid, trifid, spurless, velvety-brown, mottled with yellow. Column erect, curving over anther. Inflorescence spicate, flowers few in number. Leaves lanceolate, the lower ones much larger than the upper. Tubers at root.—Dry pasturage and down land. June, July. Perennial. *p.* 121.

HEMP-NETTLE, *GALEOPSIS TETRAHIT. Nat. Ord., Labiatæ.*—Calyx campanulate, with five pointed teeth, nearly regular, very hairy. Corolla tubular, very variable in size, upper lip erect, ovate, the lower spreading and three-lobed. Stamens four, arranged in pairs, the two anterior being the longest. Ovary one. Stigma two-lobed. Flowers in compact rings in the axils of the upper leaves. Leaves opposite, stalked, acuminate, ovate, hairy, coarsely serrate. Stem slightly branching, square, swelling at nodes, hairy.—Cultivated ground and rubbish-heaps. July, August, September. Annual. *p.* 125.

WATER-CRESS, *NASTURTIUM OFFICINALE. Nat. Ord., Cruciferæ.*—Calyx of four ovate, deciduous, glabrous sepals. Corolla cruciform, of four white and spreading petals. Stamens tetradynamous. Inflorescence racemose, ebracteate. Style short, having obtuse capitate stigma. Fruit a two-valved pod. Leaves pinnate, alternate, glabrous, lobed, succulent. Stem thick, glabrous, branching, rooting.—Brooks and streams. May, June, July, August. Perennial. *p.* 129.

CHERRY, *PRUNUS CERASUS. Nat. Ord., Rosaceæ.*—Calyx inferior, deciduous, five-cleft. Corolla of five petals, white, perigynous,

equal. Stamens numerous, inserted on calyx. Ovary one. Fruit a fleshy drupe. Flowers in umbels, on long pedicels, issuing from rings of scales. Leaves alternate, serrate, ovate, stipulate. A shrub or small tree.—Woods and hedgerows. May. *p.* 133.

SALAD BURNET, *POTERIUM SANGUISORBA. Nat. Ord., Rosaceæ.*—Flowers grouped in globular heads, on long footstalks. Upper flowers female, lower ones male. Calyx four-lobed, superior. Corolla wanting. Stamens perigynous, very numerous, pendulous. Styles two, long, ending in tufted, purple stigmas. Stem wiry, angular. Leaves pinnate, having numerous pairs of nearly equal, ovate, serrate leaflets.—Dry pastures and embankments in limestone and chalk districts. June, July, August. Perennial *p.* 137.

MARSH THISTLE, *CNICUS PALUSTRIS. Nat. Ord., Compositæ* —Flower-heads homogamous, numerous, clustered together at the summit of the long stem, forming a terminal and compact corymb. Florets purple, all equal and tubular, five-cleft. Stamens five. Ovary one. Involucral bracts very numerous and closely imbricate. Pappus plumose. Stem winged, prickly, tough, erect, five or six feet high. Leaves decurrent, narrow, pinnatifid, wavy, lobed, prickly.—Moist pastures, damp and shady woods. July. Annual or biennial. *p.* 141.

TEASEL, *DIPSACUS SYLVESTRIS. Nat. Ord., Dipsacaceæ.*—Flowers in compact cylindrical heads, having at base an involucre of six to twelve prickly bracts, rigid, unequal, curving upwards. Calyx minute, cup-shaped. Receptacle bearing the florets covered with spinous and hooked scales. Corolla four-lobed, monopetalous, lilac, having oblique limb. Stamens four, inserted in tube. Ovary one celled. Style one. Fruit small, dry, indehiscent, crowned by calyx. Leaves opposite, the upper leaves connate, undivided, prickles on midribs. Stems rigid, prickly, angular, four to five feet high.—Hedges and roadsides. August and September. Biennial. *p.* 145.

RED-BERRIED BRYONY, *BRYONIA DIOICA. Nat. Ord., Cucurbitaceæ.*—Calyx with five small teeth. Corolla five-cleft, conspicuously reticulated. Flowers diœcious, racemose, axillary; pale, whitish green. Stamens five. Style short; stigmas lobed. Ovary

globular, one-celled. Fruit a berry. Leaves deeply divided into five or seven lobes, rough, coarsely-serrated. Tendrils. Stems long, climbing, hairy, branched, weak. Root, tuberous, large, often branched; white.—Hedges and copses. All the summer. Perennial. *p.* 149.

WOOD LOOSESTRIFE, *LYSIMACHIA NEMORUM. Nat. Ord., Primulaceæ.*—Calyx of five acutely-pointed segments. Corolla rotate, bright yellow, deeply five-lobed. Stamens five. Style single, with capitate stigma. Capsule single, one-celled, opening at top. Leaves opposite, ovate, almost sessile. Flowers borne singly on slender and long pedicels from the axils of the leaves; the pedicels curl back after the flowering is over. Stem slender, procumbent, rooting at the lower nodes.—Woods and copses. May to September. Perennial. *p.* 153.

WATER AVENS, *GEUM RIVALE. Nat. Ord., Rosaceæ.*—Calyx tube short, five large segments, and five much smaller ones alternating with them, purplish. Corolla dull yellowish red, of five heart-shaped perigynous and equal petals. Stamens perigynous, numerous. Flowers few in number and drooping, growing singly on long peduncles. Fruit an achene, surmounted by a long and feathery awn. Leaves chiefly radical, interruptedly pinnate, the terminal segment much larger than the others, serrate, upper leaves much more simple in character, lanceolate or ternate, serrate. Stipules small, toothed. Stems erect, scarcely branching.—Marshes, sides of canals, damp woods, and boggy moorlands. May, June, July. Perennial. *p.* 157.

FAMILIAR WILD FLOWERS.

THE BUGLE AND TALL FESCUE GRASS.

Ajuga reptans. *Nat. Ord., Labiatæ.*
Festuca elatior. *Nat. Ord., Graminaceæ.*

HILE quite as common in its occurrence in most parts of the country as its beautiful contemporary, the cowslip, the bugle is not by any means so well known. The general effect of the plant is dull and sombre, and its ordinary and formal habit of growth, added to its want of striking colour or form, are features that render it very liable to be overlooked. It is, nevertheless, a plant that will repay a closer examination than often, we imagine, falls to its lot, as the forms of its blossoms and the delicate harmony of colour seen in its upper leaves, flowers, and buds, in various tints of blending purples and greens, are points that are sufficiently attractive when fairly brought before the eye.

The bugle is the *Ajuga reptans* of the scientific observer. The generic name was first applied by Linnæus to the present plant, from a belief that this or some closely-allied species was the one referred to by Pliny

and other classic writers by a very similar name—a name, it has been suggested, probably corrupted from *abiga*, a word itself in turn derived from the Latin verb *abigo*, to drive away. Like almost all common herbs, a considerable amount of medicinal power was ascribed to it in earlier times, a fact indicated in this derivation, the thing driven away through its potent efficacy being some one or other of the ailments of humanity. The specific term *reptans* is derived from the Latin word for creeping, and merely refers to one feature of its growth. We find the word used again in the *Potentilla reptans*, or cinquefoil, a plant having long trailing stems. The early writers, with that variation of spelling that is so marked a feature in old authors, speak of the plant as the abija, ajuga, abuga, and bugula, and the common English name bugle is clearly a corruption springing from these.

The root-stock of the bugle throws off several creeping stems, and from these rise the erect flowering-stems. These flowering-stems vary a good deal in height; where circumstances have been unusually propitious, or where a tangled undergrowth of coarse grass has made the plant draw up towards the air and sunshine, they may be found almost a foot in length, but ordinarily the half of this may be considered a fairly typical size. The leaves are very simple in form, and always grow in pairs; the latter feature is common, not only to all the plants of the genus, but to those of all the other genera included in the great family of labiate plants. The sage, mint, thyme, marjoram, ground ivy, betony, and dead-nettle are other familiar plants of the same great natural group. The flowers of the labiates are always only bi-symmetrical in form, not multi-symmetrical as in the buttercup or daisy,

and have a tube terminating in a broad lower expansion, which is generally cut up into several lobes, and an upper portion, which ordinarily is simple in form. In the bugle the tube of the blossom is much longer than the calyx; the upper lip of the flower is short and inconspicuous, the lower lip is much larger and cut into three lobes. The flowers grow in a ring, or whorl, and spring from the axils of almost all the leaves. As the upper leaves are much closer together than those on the lower part of the stem, the head of flowers grows more dense. The whorls differ a good deal in the number of flowers constituting them; sometimes there will be but seven or eight in the ring, while in other cases eighteen or twenty may be found. The flowers are of a purplish-blue, and ordinarily the whole of the upper portion of the plant partakes of this colour. We have occasionally found a variety of the plant having white blossoms; in this the stem and leaves are pale green; there is none of the rich warmth of colour in the general mass of the flowering-stem that in the normal state of the plant—as in the ground ivy, again—is such a characteristic and pleasing feature.

The bugle is found in damp shady pastures and woods, and is abundantly distributed throughout Britain. It will ordinarily be found in flower by about the end of April, and lasts in blossom till nearly the end of June. It is a perennial.

An allied species, the *Ajuga chamæpitys*, or yellow bugle, is not uncommonly met with in some of the southern and eastern counties of England. The leaves are very closely placed together, and each leaf is divided almost to its base into three very long and narrow segments. It is not altogether unlike the long needle-like foliage of the pine,

and has hence received a second name, the ground-pine. The flowers are bright yellow, spotted with red; it is therefore, both in foliage and blossom, very unlike the present plant.

The common bugle was at one time much used as a vulnerary. "It is so singular good," an old writer tells us, "for all sorts of hurts in the body, that none that know its usefulness will ever be without it. If the virtues of it make you fall in love with it (as they will if you be wise), keep a syrup of it to take inwardly and an ointment and plaister of it to use outwardly always by you."

The grass figured with the bugle in our illustration is the *Festuca elatior*, or tall fescue grass, a graceful species commonly to be met with in moist situations. It assumes a considerable variety of form, the spikelets being sometimes arranged in a simple series, as we have them here represented, while at other times the head is much more spreading. It is a perennial, and flowers in the early part of the summer.

IVY-LEAVED TOAD-FLAX.

IVY-LEAVED TOAD-FLAX.

Linaria Cymbalaria. Nat. Ord., Scrophulariaceæ.

SIR WILLIAM HOOKER, in the "British Flora," prepared conjointly by Dr. Walker Arnott and himself, has marked the present plant doubtfully authentic as a British species, or rather, we may almost say, denies its claim altogether. In the preface we read, "The many plants that have been, or are daily becoming, naturalised amongst us, whether by the agency of man or of birds, are branded with an asterisk," and the ivy-leaved toadflax is one that is thus branded or distinguished in the body of the book. There is no doubt whatever that the plant has not been a Briton *ab initio*, whenever that date may have been; but as we find it mentioned by all our old writers, and find it moreover in profusion in a great many widely scattered localities throughout Britain and Ireland, it is fully entitled to a place in our series.

Though the plant is really a member of the flora of Southern Europe and the countries that border the great

Mediterranean basin, it has become naturalised over almost the whole of Europe, and has made itself thoroughly at home amongst ourselves. It seems to thrive best on rocks or old walls that are near the edges of streams, though the neighbourhood of water does not seem absolutely necessary. We have often seen it growing out of the mortar-joints of crumbling brickwork far from any stream; but the finest examples we can remember to have noticed were on the old walls that skirt the towing-path on so many points on the Thames above London, and in a similar situation bordering a canal at Bath Wherever the plant is found at all it is to be found in profusion, large spaces of wall being filled by its graceful tapestry of foliage and blossom hanging from every available crevice. The plant is sometimes called by country folks the "mother of thousands." In Italy it is the "plant of the Madonna." In turning over a number of old studies we find one that we made some years ago of this plant, and see that the specimen from which our sketch was made was gathered from the walls of Ockham Church, Surrey, a church that has a good deal of thirteenth century work about it, and in its crumbling decay affords many a weather-worn gap between the stones. We mention this locality because it gives so good an illustration of the perfect way in which the plant has naturalised itself, for this church stands in a thoroughly rural district, and we may feel morally certain that no human hand planted this graceful herb upon its ancient walls. The plant is a perennial, and its flowering time extends from May to September.

The ivy-leaved toadflax is so perfectly distinct from the other members of the genus *Linaria*, and, as we shall see presently, so utterly belies its generic name, that there

is no possibility of confusing it. We have already figured the common toadflax or *L. vulgaris*. How the present plant got introduced into Britain can now only be conjectured, but we know that during the Middle Ages many foreign plants were introduced into England on account of either their beauty or their medicinal value. In such books as that of Gerarde we read repeatedly of plants being brought from abroad for the herb-garden of the author by his friends. The plant was by the old herbalist credited with certain virtues, and from its situation by the water-side it was naturally assumed to be "cooling." In Southern Europe it is eaten as a salad, as it tastes very like cress, and it is, like our water-cress and other salad plants, held to be an anti-scorbutic. The plant has rather a strong smell, which is by some considered disagreeable.

We now proceed to consider the plant a little more in detail; and, beginning with the root, we find how admirably its fibrous nature adapts it for searching out and retaining its hold of the cracks and crevices into which it inserts itself, and from which it can scarcely be eradicated. Its long, trailing stems often root, too, at their lower joints, and so give additional points of attachment. The stalks are numerous and very slender, hanging downwards from the point of attachment to the plant, and though apparently very fragile, are somewhat stringy and tough, and well able to bear the buffeting which their breezy situation often exposes them to. These stems are very long in proportion to their thickness, and, except in the youngest shoots, purplish in colour. The leaves are very ivy-like in form, and are cut up into five prominent lobes or divisions: they are somewhat thick or fleshy in texture, and smooth to the touch. The stems on which they are borne are long

and slender, and when the plant is plucked or stirred by the wind, we notice that the backs of the leaves are of a reddish purple colour; one of those in our illustration has sufficiently turned over to enable us to perceive this. The thick texture of the foliage causes its veining to be only very slightly visible. From the axils of the leaves spring the flower-stalks, about equal in length to the stalks that bear the leaves. The flowers are small, and of a delicate lilac, the palate being bright yellow, and each blossom, as in the other toadflaxes, ends in a spur.

Botanically, the plant is the *Linaria Cymbalaria*. The generic name is derived from the Latin *linum*, flax, as the leaves of many of the species are very flax-like in appearance, though the foliage of the present species is very dissimilar. Gerarde illustrates the plant, and makes it springing from brickwork; but those who arranged his blocks could not understand how a plant could grow downwards, so it stands erect. Parkinson, in 1640, calls it the *C. hederacea*, and says "it groweth naturally in many places of our land." His illustration, too, is turned the wrong way uppermost.

SPEAR-PLUME THISTLE.

THE SPEAR-PLUME THISTLE.

Cnicus lanceolatus. Nat. Ord., Compositæ.

WE shall later on figure more species of our numerous indigenous thistles, such as the nodding thistle, but our present illustration represents another, which is perhaps equally striking in form, and is of even more common occurrence, for there are few hedgerows and wayside wastes in which it may not be encountered in more or less abundance. The musk thistle is exceedingly common in its special localities, and so, too, is the spear-plume in its favourite places of growth; but as the former is a lover of the bleak moorland or open down, while the other is in almost every hedgeside, the profusion of the latter, though perhaps not actually greater, is at least more immediately noticeable by the ordinary observer.

The spear-plume thistle is the *Cnicus lanceolatus* of

botanical classification. The generic name is derived from a Greek verb, signifying to pierce or wound, and is sufficiently expressive of the prickly character of the plants. It may be good policy to grasp your nettle boldly, but the thistle seems to necessitate another treatment altogether, or a sharp repentance of a step too rashly bold will give marked emphasis to the point of the derivation. The specific name, signifying *like a lance-head*, is bestowed on the plant from the form of its foliage. Its familiar English name was no doubt given to it from its sturdy upright growth and the sharp points with which it is armed, while the tufted crimson-purple blossoms with which it is crowned may not inaptly represent the warrior's plume.

The plant is a biennial. Its stems are stout and strong, and attain to a height of some three or four feet. The leaves, as we have seen, are lanceolate in shape, deeply cut, each lobe terminating in a long and very acute prickle. The leaves are on their upper surface of a rather dark green colour and covered with spinous hairs, while the lower surface is lighter in colour and covered with a downy or cottony substance. Like those of the nodding thistle or the comfrey, the leaves of the spear-plume are continued some distance down the stem from which they spring. The flower-heads stand singly (in some species of thistle, as in the marsh thistle, *Cnicus palustris*, they grow in a dense cluster), and are large and conspicuous. Like all the other thistles, the flowers are succeeded by the feathery seeds, which, when ripe, are wafted on the breeze over the whole country side. The various species of thistle not unfrequently vary from the normal colour of their flowers to pure white, and to this the spear-plume is no exception. It may perhaps be

advisable to take this opportunity of briefly describing the commoner species of the genus in this place, though we shall deal with them more fully in later volumes. We must, however, refer, in passing, to the milk thistle (*Carduus marianus*), a plant which is by no means common, but which may be at times found. It may at once be known by the large white veins which reticulate so conspicuously over its glossy dark green leaves; the flowers, too, are very large and handsome in form and colour.

There are thirteen or fourteen indigenous species of thistle, but it would be impossible to convey a true idea of their peculiarities by a mere description, without going into technicalities that would be quite beyond our present scope. A further difficulty in indentifying the various species is found in the fact that besides the recognised specific forms, many of the species hybridise freely, and thus a series of intermediate forms of more or less permanence and distinctness of character is created. The only other species which we need here refer to are the marsh thistle and the dwarf thistle, both sufficiently distinctive forms to render our remarks intelligible and, we trust, serviceable.

The marsh-thistle, *C. palustris* (Lat. *palus*, a marsh), throws up a long stiff stem; it is scarcely branched at all, and is often from five to six feet high. These stems bristle throughout their entire length with closely-set and peculiarly pointed spines. The leaves are narrow and long, much narrower in proportion to their length than those of the spear-plume thistle, and run for a considerable distance down the stem. The flower-heads are small in themselves, but are grouped together into large clusters, a feature that tends

to distinguish it from most of our thistles, though one or two others exhibit the same characteristic in a minor degree. The marsh-thistle flowers by about the end of June, and lasts some considerable time in blossom. It is abundantly met with in moist low-lying meadows throughout Britain. The dwarf thistle, *Cnicus acaulis*, or stalkless thistle, is a species of very common occurrence in the south and some central districts of England, but is not freely found elsewhere in our islands. It is abundantly met with on dry pasturage, and more especially on gravel and chalk. It is at once distinguished from all our other species by the absence of a stem. Its numerous small and very prickly leaves spread out in a circle close to the turf, and from the centre rises one or more flower-heads, the entire plant being thus only three or four inches high. The flowers are rather large and of a deep purple colour, and have a somewhat quaint effect as they are seen just emerging from the short springy grass on the face of some great swelling down. The plant is a perennial, and flowers during July, August, and September.

MARSH MARIGOLD AND DAISY.

THE MARSH MARIGOLD AND THE DAISY.

Caltha palustris. *Nat. Ord.*, *Ranunculaceæ.*
Bellis perennis. *Nat. Ord.*, *Compositæ.*

GROWING wherever the ground is damp, the marsh marigold, or *Caltha palustris*, is one of the more conspicuous spring flowers, and as such can scarcely have failed to attract the notice of most of our readers, occurring as it does in such great profusion, and making the low-lying meadows and river-sides brilliant with its masses of deep yellow flowers. The generic name is derived from the Greek word for a cup, and very appropriately points out one conspicuous feature, the large golden cup-like form of the blossoms. The specific name is derived from the Latin *palus*, a marsh, in obvious reference to one of its favourite places of growth, while the name marigold refers to its use in church festivals in the Middle Ages as one of the flowers devoted to the Virgin Mary. The *Caltha* is a perennial, and forms large tufts or masses. The stems are about a foot in height, generally erect, but at times creeping somewhat, and rooting again

at intervals in the lower portions. The greater number of the leaves spring directly from the ground. The blossoms may ordinarily be met with by about the middle of March, and last until about the middle of June. The plant is closely allied to the various species of buttercup, but the flowers have no corolla, the brilliant yellow cup being composed of the five petaloid sepals. A variety is occasionally met with in mountainous regions in which the blossoms are much smaller and the foliage somewhat different in shape, but there would appear to be no sufficient justification for raising it, as some few writers have done, to the dignity of an independent species.

Every part of the plant is strongly irritant in its nature, and several cases are on record of serious effects produced by rashly experimenting on its powers. The buds have occasionally been used as a substitute for capers; the exchange is a very dangerous one, though possibly a long soaking in vinegar may go far to remove the acrid and poisonous nature of the buds in a fresh state.

Shakespeare refers once or twice to the flower; it appears to have been rather a favourite with him. The lines—

> "Winking Marybuds begin
> To ope their golden eyes"

are a sufficient illustration of his use of the plant, though other instances will readily occur to the mind of the Shakespearian student. It is curious that in some parts of the country the marsh marigold is called the mare-blob, a name which it has been suggested may have been derived originally from mere-blob, in allusion to the habitat of the plant, but which we should

imagine is more likely to be a corruption of this old name Mary-bud.

Sharing the plate with the marsh marigold is the well-known daisy, the universal favourite, the centre of so many rural and poetic associations that its insertion must surely seem to have been almost superfluous, though possibly its omission from the ranks of our familiar wild flowers would have been still more unpardonable, since it is one of the commonest of them all.

Into the wealth of poetical associations that clusters round this little wayside flower we must not here enter, as we have already, in our "Bards and Blossoms," gone at great length into the subject. Suffice it here to say that no other plant has received so marked a tribute. Wordsworth himself truly describes it as "the poets' darling." Botanically our little flower is the *Bellis perennis*. The generic name is derived from the Latin *bellus*, pretty or charming, though, according to some old writers, it owes its name to a dryad named Belidis. The specific name clearly refers to its perennial growth. The common name is a corruption of the old English name day's eye, a name at least as old as Chaucer's day, as, after speaking of its closing each night at the approach of darkness, he says—

> "Well by reason men it call maie
> The Daisie, or else the Eye of the Daie."

It is in Scotland the bairnwort, a sufficiently expressive name as testifying to the joy the children feel in wandering in the meadows and gathering it by the lapful for the manufacture of daisy-chains. It is in France the Marguerite, a word derived from the Lat. *margarita*, a pearl. St. Louis of France employed as a device on his

ring, a crucifix having beside it a lily, in allusion to the heraldic insignia of France, and a daisy, referring to the name of his wife Margaret, daughter of Raymond Beranger, Count of Toulouse, who accompanied him on the sixth crusade. The ring was thus the sign of all he held most dear—religion, his country, and his bride. In Wales the daisy is again the eye of the day, or Llygad y Dydd. The daisy is perhaps seen in greatest profusion in the early summer when the meadows are often a sheet of white from the countless blossoms, but it may more or less commonly be met with almost throughout the year. The plant is found in such abundance through Britain that any attempt at verbal description is entirely superfluous.

AGRIMONY.

THE AGRIMONY.

Agrimonia Eupatoria. Nat. Ord., Rosaceæ.

THE agrimony is one of the most graceful in general growth of our smaller herbs, and the nearer inspection of its parts confirms the favourable impression made on us by a first glance. The long flowering-stems rise to a height of some two feet or so, and terminate in a long spike of yellow blossoms. As we have not had occasion to use the term before, we may mention that the inflorescence of a plant is said to be a spike when a series of stemless flowers spring from the one central stalk that is common to them all. The flowers are in this case said to be sessile, a term meaning sitting. The spicate inflorescence is not often found, as in most cases the flowers that spring from such central stem are not adherent, but are borne on short stems of their own, as we see in

the wild hyacinth, and many other flowers. At the base of each flower in the agrimony we find a small bract cleft into three acute segments. The flowers have five conspicuous and spreading petals, which are somewhat narrow in proportion to their length, and of a bright yellow colour. The flowers face boldly outwards and upwards towards the light, but after these have withered the calyx points downwards, and becomes thickly covered around its extremity with a mass of small bristly hairs that spread and develop into a burr-like form. The leaves are very rich in outline; those near the ground are often seven or eight inches long, while the upper leaves will generally be only about three inches in length. A very beautiful gradation both in the size and richness of the leaves is readily noticeable. All the leaves are very similar in general character, but the upper leaves have far fewer leaflets than the lower, and such leaflets as there are, are less cut into segments, and have altogether a simpler outline. These leaflets, as may readily be seen in the illustration, vary very considerably in size, as besides the six or eight large lateral leaflets and the terminal one—those that at once catch the eye—the stem is fringed with several others that are very much smaller than these, and ranged in the intervals between them. The form is a very beautiful one, and may be very well seen in several other plants besides the agrimony. The silverweed and the common avens are good examples, and easily to be procured for comparison.

The agrimony is very commonly found throughout England and Ireland. In Scotland it is much more local, and does not penetrate very far northward. It must be looked for on hedge-banks, roadsides, and on patches

of waste ground. The plant is perennial, and flowers from the middle of June to about the end of August. It is the *Agrimonia Eupatoria* of the botanist. It is a plant that is subject to a very considerable amount of variation, some specimens being far larger than others, much more clothed with hair, and presenting many other differences. It has therefore by some writers been divided into two species, but it is now very fairly established by general consent that the division can scarcely be maintained. As one of the features that accompanies the fuller development of the parts is a greater fragrance, one of the species was named *A. odorata.* The generic title is corrupted from the word *argemone,* a name given by the early Greek writers to a plant held in great repute for the cure of cataract. There is very little proof forthcoming that this is the plant these old writers referred to, but like most other plants, it had in the Middle Ages, various virtues assigned to it, virtues into which we need not here go, as many of them are too palpably out of all reason to make it worth while even to enumerate them; curiously enough, however, amidst the numerous ailments the agrimony was reported to cure, we find no mention of an eye affection, cataract or any other. The plant would really appear to be in some slight degree febrifugal and tonic in its operation. It is one of the plants that in some districts form what is called "spring drink," a compound made by an infusion of several herbs, and drunk, as the name implies, in the spring-time, as a purifier of the blood. It is also said by some writers that the agrimony yields a good yellow dye. How far this may be the case we are unable to say, as we have no personal knowledge; but we do know that many such

statements are not altogether trustworthy. An old writer affirms some such property, and the statement is copied without question into one book after another, no one apparently caring to take the trouble to verify it. We remember, for example, reading that the juice of the berry of the dwale, or deadly-nightshade, would stain paper a beautiful and permanent purple. We tried it; the beauty was even at first by no means apparent, and the dull and dingy colour of the paper in a day or two's time afforded an effectual answer as to the question of the permanency of the dye.

BIRD'S-FOOT TREFOIL

THE BIRD'S-FOOT TREFOIL.

Lotus corniculatus. Nat. Ord., Leguminosæ.

AMONGST the many species of trefoils which adorn our meadows and hedgerows there are few, if any, more strikingly beautiful than the bird's-foot trefoil, the subject of our present illustration. The pure rich yellow of its clustering blossoms, the exquisite curves and proportions of the leaflets composing its foliage, the quaint form assumed by the head of pods, and the general grace and delicacy of the whole, combine to render it one of our most attractive plants: one that the eye always welcomes in the early summer and rests on with pleasure. It is the *Lotus corniculatus* of botanical science.

The bird's-foot trefoil is ordinarily met with in flower by the middle of May, and may be found until the beginning of October, though it may be considered at its best only in May and June, as later on it is not

so freely seen, and the sultry heat of the summer and autumn months gives a different character to the plant, a hard, parched, and wiry look taking the place of the soft and tender growth of the early summer days. The bird's-foot trefoil is a perennial; the plant is ordinarily about a foot high, though in this respect a considerable difference may be noted, some specimens being barely half this height, while under certain circumstances plants may be found almost as high again. The leaves have three leaflets at their apex and two others at their base, at the point of springing from the stem. The flower-stalks are of considerable length, and bear at their extremity a cluster of bright yellow flowers, from two or three to ten or twelve in number; a small leaf will always be found at the point where the umbel of flowers is given off from the peduncle, or flower-stem. The buds before their full expansion are often a deep red in colour, and plants may occasionally be found where this red tinge is sufficiently perceptible throughout the whole period of flowering to become a very marked and noticeable feature. The pods that succeed the flowers are cylindrical in form and about an inch in length, and as they are all nearly horizontal in direction, and spring from the same level, they bear a very good resemblance to the foot of a bird—hence the common name of the plant. "This small herb groweth not above a span high, with many branches spread upon the ground, set with many wings of small leaves. The flowers grow upon the branches, many small ones being set a head together, which afterwards turneth into small jointed cods, well resembling the claws of small birds, whence it took its name." The specific name, *Corniculatus*, is derived from the Latin *cornicula*, a little crow, the diminutive form of

cornix, in allusion again to this resemblance of the pods to a bird's foot; while the generic title, *Lotus*, is given to it from a belief that it may possibly be one of these species on which the ancient Greeks bestowed that name.

The bird's-foot trefoil is subject to considerable variations of form, these modifications of the type being either considered as mere varieties, more or less permanent, or elevated to the rank of distinct species, according to the amount of variation and the frame of mind of the observer. Botanists have been colloquially divided into two great classes—the "splitters" and the "massers"; the first of these make the most of every little divergence from the type, and split up each species into several sub-species, while the latter ignore all these minor points as being, if not altogether immaterial, at least insufficient to found anything like permanent and specific distinctions upon. Four very distinct forms of bird's-foot trefoil may, however, be noticed, though, as many intermediate forms may also be met with, they can perhaps scarcely be considered more than modifications, owing to various external circumstances, of the original and typical form. The greater lotus, which has, perhaps, the best title to an independent specific rank, and as such is by some botanists called the *Lotus major*, has all its parts larger than in the more strictly typical plant; but as it is found more especially in moist meadow-land and by the sides of ditches, it is quite open to question whether this dampness of situation may not go very far in creating the richer development. The hairy lotus and the narrow-leaved lotus are two other forms. The first, the *Lotus villosus* of the "splitters," is very similar to the common plant, except that the calyx, stems, and leaves are covered with long and spreading hairs; it is a species or

variety not often met with. The second, the *Lotus tenuis*, or *tenuifolius*, is a lighter and more delicate plant than the type form, and is chiefly conspicuous from the narrowness of the leaflets; like the former, it is not a common form.

The slender bird's-foot trefoil, the *Lotus angustissimus* of botanical nomenclature, has an undoubted claim to rank as an independent species; its flowers are ordinarily in pairs, the blossoms are much smaller than in the common species, and as the pods are of necessity only in pairs as well the resemblance to a bird's foot is by no means so clear. Unlike the *Lotus corniculatus*, it is a very rare plant.

WHITE CAMPION.

THE WHITE CAMPION.

Lychnis vespertina. Nat. Ord., Caryophyllaceæ.

OUR present subject, graceful as it is in itself, has an additional charm arising from the circumstances under which we ordinarily find it. While most plants expand their blossoms very freely in the life-giving rays of the morning sun; while others, as the little pimpernel, will not expand at all if its genial influence be withdrawn—some few, like the evening primrose and the white campion, reserve their full sweetness for the closing hours of day, expand their blossoms to the chill dews of the night, and mingle their sweetness with the rich odours that float on the evening air in the woodland copse or the flower-sprinkled hedgerow. The pure white of its blossoms, and their large size, tend to attract attention; and in the gathering darkness its stellate flowers stand out from the gloom and indistinct forms of the hedge-bank like the starry host of heaven

emerging one by one from the deepening twilight. The night-flowering catchfly, the *Silene noctiflora* of the botanist, a closely-allied plant, is also—as its name clearly demonstrates, both in the vulgar tongue and the scientific appellation—another of these flowers of the evening. Its blossoms are large and very sweetly scented, but not so purely white as those of the evening campion, being ordinarily reddish in tint.

The white campion is the *Lychnis vespertina* of botanical classification. The generic name is derived from the Greek word for a lamp. The name was first applied to the genus by the great Linnæus. Though one fails at first to see any special connection between the flower and a lamp, and is at the outset inclined to detect some recondite poetical allusion to the silvery gleaming of the blossoms in the dusk of the evening, the explanation of the term is much more prosaic. It is suggested by the fact, that the thick woolly substance that is so marked a peculiarity on the leaves of some of the species has either itself been used as a wick to a lamp, or is at least very similar to the material that some few other plants did render for such a service in olden time. The specific name *vespertina* is a Latin adjective, meaning that which pertains to the evening; another equally common and allied species, the red campion, being the *Lychnis diurna*, the specific name in this case being also Latin in its origin, and signifying that which belongs to the day. We have never seen any probable derivation given, or even suggested, for the common English name campion; but as the greater number of these names originated in the Middle Ages, when the monkish Latin influenced so many of the names given, we may, we think, not altogether unreasonably

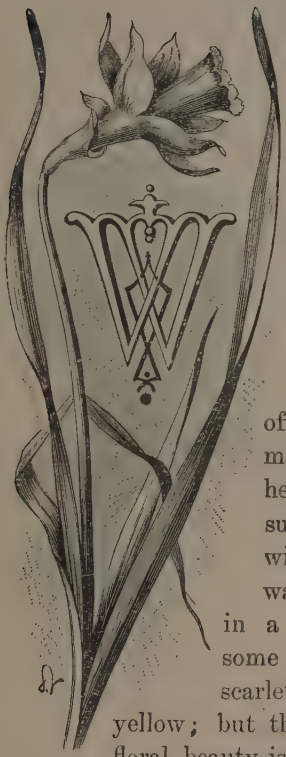
suggest that very possibly the Latin *campus*, an open field or plain, may have been the root of the vulgar name of a plant that is so distinctly campestral in its origin.

The white campion is very commonly met with in hedgerows and fields throughout Britain. It will ordinarily be found in flower by about the middle of May, and lasts in blossom until the end of October, or even later. It is a rather coarse-looking plant, the stems and leaves clothed with long and conspicuous hairs, and at the joints of the stems we often find a certain viscidity. The plant grows to about the height of two feet, and has a decidedly upright growth, but few branches being given off laterally, and those not diverging at any great angle from the line of the main stems. The leaves, as in all the plants that form the order, are arranged in pairs on the stem, and are of simple outline. In none of the plants of the order do we find the jagged or serrated edge to the leaf that is so marked a feature in the foliage of many other plants. The garden pink and the sweet-william are cultivated species of the order that will be easily accessible for the purpose of observation and comparison. The upper leaves of the white campion are stalkless, as shown in our figure, while the lower ones are borne on leaf-stems. The flowers are few in number, but conspicuous from the purity of their tint and large size; occasionally they are found of a pale pink, but this is a variation but seldom met with. The plant is ordinarily what is termed by botanists diœcious, a term used when all the flowers of a given plant are either all male, or stamen-bearing, or else female, pistil-bearing. A section cut downwards through the centre of the flowers will at once determine their nature; and, indeed, the external appearance of the calyx is, in the fully-developed

flower, a sufficient indication, as it is much larger and rounder in form in the pistillate flowers than in those bearing stamens. Whatever be the nature of the flower, whether pistillate or staminate, both series of parts will be represented; though in the former case the stamens will be abortive and imperfectly developed, while in the latter it is the pistil that is in the imperfect and rudimentary condition. The plant is biennial.

The red campion is a very similar plant, though in this the petals are a deep pink, and the blossoms are scentless and fully expanded throughout the day. The plant is generally more delicate in form than the somewhat rank-growing white campion, and is commonly rather earlier in its flowering. It is equally abundantly met with, though ordinarily in more shaded and damper situations than those wherein its near relative, the white campion, flourishes.

DAFFODIL



THE DAFFODIL.

Narcissus pseudo-narcissus. Nat. Ord., Amaryllidaceæ.

WITH the exception of the hyacinth, the subject of another of our illustrations, there is, perhaps, no wild flower that makes so grand a show during the brief period of its existence as the daffodil. We may sometimes see in places the hedges white with hawthorn, or the surface of the stream sheeted over with the countless blossoms of the water-buttercups; we may sometimes in a field note where the poppies in some spots give a bright streak of scarlet, or the charlock a mass of golden yellow; but the sense of profusion and wealth of floral beauty is, after all, nowhere and at no time so truly felt as in the woods in spring, when the ground, as far as the eye can reach beneath the overhanging boughs, is one mass of gold or purple, where the rich green moss or the dark brown of the fallen leaves is blotted out, except at one's very feet, by the countless thousands of daffodils or hyacinths. In a large wood, near where we now write, this beautiful sight is an annual

treat, and the people from the neighbouring town carry them off, both hyacinths and daffodils, in great handfuls; but such is the profusion, that no amount of gathering seems to reduce them in the least. If the bulbs of the daffodil be taken up carefully a little before the time of flowering, the change does not appear to affect them, and in a fortnight's time they will be blossoming quite freely, and they then form a very pleasing centrepiece for the drawing-room table. After flowering, the bulbs should be taken up and put in the garden, but the plants, though they did not appear to feel the removal at the time, will not blossom the next year, though after then again they will have become quite established in their new home, and will flower as freely as at first, if placed in a somewhat moist and shady situation. We are told that at an international conference once held, the representative of Great Britain was the most conspicuous figure present, as his breast alone was bare of jewelled stars and orders, and in like manner we may consider the daffodil to be truly remarkable, for while almost every other plant in our flora had some healing virtue, justly or empirically assigned to it by our old herbalists, and many of them were each individually a whole armoury in themselves against the attacks of almost every disease, we are unable to find a single medical reference to the daffodil. To compensate for this neglect on the part of the followers of Æsculapius, it is one of the favourite flowers of the poets: Drayton, Herrick, Wordsworth, and others would readily supply illustrations of this appreciation.

The leaves of the daffodil are about a foot in length, and of the same character as those of the wild hyacinth. From the midst of the foliage rises the stem, slightly

overtopping the leaves, and bearing a single flower. The blossoms, as will be seen by our illustration, are of a peculiarly graceful shape, and of a bright yellow colour, the central being somewhat deeper in tint than the rays of the perianth. Unlike the hyacinth, the fragrance of which is borne far and wide on the breeze, the flowers of the daffodil are scentless. The plant, as we have seen, is more especially a dweller in the woods, but it may at times be found in moist meadows, though even then ordinarily beneath the welcome shade of some isolated or hedgerow tree. The first week of March is about the average date of the appearance of the flowers, and by the middle of April their beauty is a thing of the past.

The daffodil is the *Narcissus pseudo-narcissus* of the botanist. The genus takes its name from the narcissus flower, and the meaning of the name of our present plant may be roughly given as the narcissus-like flower. The word *narcissus* itself is derived from the Greek word for stupor, and refers to the very powerful scent of the flowers; though, according to other authorities, the name is rather given from the assumption that this is the plant into which, according to the classic myth, related by Ovid, the youth Narcissus was changed. The daffodil, vulgarly called also the daffy-down-dilly, or the daffy, derives its name from a certain resemblance that it bears to the asphodel—the one word is a corruption from the other. It is in France the *fleur d'asphodèle.*

The true narcissus, *N. poeticus*, is placed by some writers in the flora of Great Britain, but its claims, unfortunately, are slight. Its blossoms are pure white, with the exception of a ring of bright red as a bordering to the nectary. The odour, though too strong to be agreeable to some

persons, is very rich and fragrant, and has, with the beauty of its snow-white flowers, led to its frequent cultivation. The *N. biflorus*, the two-flowered narcissus or primrose-peerless, as it is sometimes called, is an allied species; the flowers are of a pale straw-colour, and, as the specific name implies, grow in pairs at the summit of the stem. Though ordinarily met with as a garden flower, it would appear to be truly indigenous, though only traceable in some few localities. The genus has been largely cultivated by florists. A very common variety of the ordinary daffodil is the double yellow; it is in almost every cottage garden, but, to our thinking, it will not stand comparison in beauty with the wild single flower. Several other garden modifications of the daffodil may be met with, together with numerous varieties of narcissus and jonquil. Most of these garden representatives of the genus originated with the Dutch florists, whose skill in the rearing of all bulbous plants is too well known to need any comment.

BROOKLIME.

THE BROOKLIME.

Veronica Beccabunga. Nat. Ord., Scrophulariaceæ.

MIDST the rank and luxuriant vegetation fringing the side of most country streams will not unfrequently be found the brooklime, the plant represented in our illustration; though its mode of growth and inconspicuous blossoms are very likely to cause it to pass unnoticed amidst the towering bulrushes, the great sword-like leaves of the iris, and the other herbage that finds in the soft bank or oozy bed of the stream and in the congenial moisture conditions most favourable to its development. Even when found it is too often cast aside in disappointment, because at first sight frequently taken for a forget-me-not; and as it has not the charms and associations of that flower, its own especial beauty is slighted and ignored.

The brooklime is the *Veronica Beccabunga* of botanical classification. We intend shortly to figure another member

of the genus, the *V. Chamædrys* or germander speedwell, and any of our readers taking the trouble to compare the two plates will at once see a strong family resemblance in the shape of the blossoms, the arrangement of the leaves in pairs, and several other minor points. When we come to our comments on the germander speedwell we shall throw such light on the generic title *Veronica* as the case will permit. It now only remains to us to see what rays can be brought to bear on the somewhat peculiar-looking specific name *Beccabunga*. Any attempt to resolve it into any Greek or Latin root is hopeless, but we must not, therefore, either in this or in any other floral name, assume that it is merely an arbitrary title—a title possessing no inherent fitness to justify its application to the special plant to which it is united, a name conveying in itself no increase of knowledge, nor any hint of suggestive association, but merely distinctive of a particular species by general usage and adoption. Examples of this class of name are not numerous, and even when we encounter a word that after long investigation baffles all our efforts to arrive at a satisfactory conclusion, we must not forget that though the great majority of the scientific terms employed are Latin or Greek in their origin, others are Celtic, Scandinavian, or Oriental; while even amongst the more familiar English names some are obsolete, refer to customs long gone by, or have lost their original meaning through ignorant and careless repetition and modification. *Datura*, the generic name of the thorn-apple, tried by any classical standard, will be pronounced meaningless, its derivation really being from the Arab name *Tatorah;* and in the same way *Nuphar*, the generic name of the yellow water-lily, is derived from the Arabic word *Naufar*. Other examples are *Betula*,

derived from the Celtic word *betu*, the birch; and *Alisma*, the water-plantain, from the Celtic *alis*, water. In the same way some of the words which we ordinarily use and accept as English are, except by their continued usage, not so at all; tobacco, for example, was adopted from the word found in use amongst the American Indians; so also was tomato, while *lilac* is the Persian name introduced together with the shrub thus called. Our English word potato is but a corruption from the Spanish *patata*, which was in turn corrupted from the Indian name for the plant. The plant we term samphire was originally, from its love of the sea-shore, dedicated to St. Peter, the fisherman of Galilee, and is still known amongst the French as the *St. Pierre*, and by the Italians as the *Herba di San Pietro*. The interest of the subject will, we trust, be sufficient excuse for this wandering from our immediate point, the derivation of *Beccabunga*. The name is Flemish in its origin, *beck-pungen* meaning "mouth-smart," a name suggested by the pungency of its leaves, which were formerly eaten in salads. We have thus tried them ourselves, but did not find them sufficiently tempting to care to repeat the experiment.

The stems of the brooklime trail, and throw out bunches of rootlets from their lower portions, while at intervals the flowering stems ascend. The leaves are stalked, slightly toothed on their margins, and thick and leathery in texture. The flowers are arranged in long racemes, the flower-stems being given off in pairs from the axils of the leaves. In the germander speedwell it will be noticed that only one flower-stem rises from each pair of leaves. A variety of the brooklime is sometimes met with having pink blossoms, but only one or two stations are recorded, and our readers

will therefore probably never come across it. The whole plant is very smooth and shining in appearance, and, like many other water-plants, very succulent. It is a perennial, and will ordinarily be found in flower by about the middle of May, lasting more or less freely in blossom until late in the autumn.

The brooklime was at one time in great favour as an anti-scorbutic. It was generally taken in combination with the watercress, but such a use for it seems now wholly a thing of the past.

The genus to which the brooklime belongs is represented in Britain by sixteen species, and of these our readers may fairly hope to find twelve. The peculiar form of the blossom, the monopetalous corolla cut into a cross-like form, but having the lower segment always smaller than any of the others, its fugacious character, and the two stamens, are all points in common, and will greatly tend to aid the identification of any of the other speedwells. Most of the species have either entirely blue or blue-and-white flowers, though in a few cases they are pinkish.

TUFTED VETCH.

TUFTED VETCH.

Vicia Cracca. Nat. Ord., Leguminosæ.

AMONGST the different species of wild peas, or tares, or vetches, as they are variously termed, our present plant, the tufted vetch, is perhaps one of the most conspicuous, as the brilliant bluish-purple of its masses of clustering blossoms, and the height to which the plant often attains in the struggle for existence in the crowded hedgerow, are points that tend to bring it into prominence. The greater number of the tares or vetches are yellow in colour, and though some of them, as the meadow vetchling, are sturdy climbers, the majority are content with a lowlier place. The flowers of the tufted vetch are severally not so large as in some of the other kinds, but what is lost in the individual is gained in the mass, as collectively they form a dense head of blossom, and it is the aggregate effect in the hedgerow that really appeals to the eye.

The tufted vetch is a very variable plant, and we have been fortunate in procuring an exceptionally fine specimen

for illustration. Under unfavourable conditions, the bunches of blossom are smaller and less compact; but where circumstances are favourable and the support is adequate, the plant will grow to a height of five or six feet, and it is then that its beauties are displayed to their full advantage. It is a common plant almost everywhere, and should be looked for on bushes, in hedgerows, and in copses. It flowers during the months of July, August, and September, after which the pods appear; these are of the characteristic pea-like form, green in colour, and about an inch in length, each pod containing some seven or eight seeds.

Curtis, in his "Flora Londinensis," published a little over a hundred years ago, is so far enamoured of the tufted vetch that he would introduce it, not indeed in the garden, where its beauties might be eclipsed by more showy plants, but in a locality far more suitable. He says, "gentlemen who wish to decorate the hedges of their plantations cannot select a more proper plant, as it is not apt, like the great bindweed, traveller's joy, and other strong growing plants, to suffocate the shrubs which support it." The tufted vetch is certainly too fragile a plant to do much harm, but we should imagine that what little influence it exercised would be in the wrong direction, and a practical woodman would be inclined to strip down all such extraneous growths. The other plants Curtis mentions are undoubted offenders, beautiful as they are in themselves. Immediately in front of us, as we write these lines, is a hedge with a most conspicuously weak and evident gap in it; but in summer this space will be filled by the foliage and blossoms of the beautiful traveller's joy, *Clematis vitalba*, its grace and fragrance being the more or less perfect

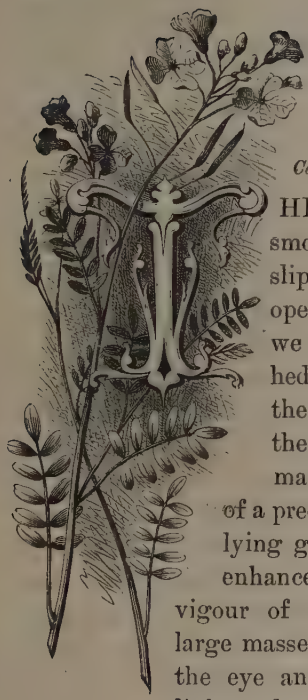
equivalent of the gap that during the winter takes its place. As the hedge is not ours, the summer beauty much more than compensates for the winter's blank, but our neighbour, the farmer, may probably hold another opinion. In the same way the honeysuckle, that looks so charming as it encircles the trees, plays sad havoc with the younger ones, for its long flexible branches bind with great power, and we have often seen young shoots deeply furrowed by them.

The author already mentioned, we see, commends the tufted vetch to the farmer as affording an excellent fodder for cattle; and, on turning to other old authorities, we find that he is not singular in his estimation of its value. It is said to be hardy, durable, nutritious, and productive; but its deficiency in weight as a crop will always make it inferior to lucerne, though the latter is affirmed to be actually less nutritious. The tufted vetch will never prosper without support, and this fact makes it unsuitable for a field-crop; the "purple tassels of the tangling vetch" will probably therefore continue to play their part as a graceful hedge tapestry, and in this fulfil their mission. Westmacott, writing in 1691 of this plant, says that "some are seen, though not usually, in most places of England, and benefit the Land, as other pulses, and are rather to be preferred for Fodder than any other use they can be put unto. Others are wild, and do no good, but spoil the corn they spring in, yet feed and advance Cattel well, saith one, that are almost starved, and are frequently found in Pastures and Meadows."

The root of the tufted vetch is perennial and creeping. The stalk, as we have pointed out, varies greatly in length, but three feet might be taken as a fair average; it is

angular and grooved, freely branching and somewhat brittle. The stipules are in pairs, and from their pointed apex, and a lateral projection on one side, are like half an arrow-head. The leaves are made up of several pairs of leaflets, and terminate in a branched tendril. The flowers, as our illustration clearly shows, grow in long racemes that spring from the axils of the leaves, alternately on one side or other of the stem. Most of the flowers point in the same general direction, and stand on short footstalks. The calyx has five teeth, the two upper ones very small; the next two being larger, and the lowest the most fully extended. The corolla is of the type we find in all the papilionaceous plants, and the stamens follow the ordinary rule of pea-flowers and are ten in number, nine being united together into one brotherhood, and the tenth being detached.

LADY'S-SMOCK, BITTER CRESS, OR CUCKOOFLOWER.



THE LADY'S-SMOCK.

Cardamine pratensis. Nat. Ord., Cruciferæ.

THE *Cardamine pratensis*, or lady's-smock, is, like the primrose and cowslip, one of the typical plants of the opening floral year. The primrose, we have seen, delights rather in the hedgerows and woods, the cowslip in the meadows and open downs, while the present plant shares with the marsh marigold—one of the subjects of a preceding illustration—the moist, low-lying grounds. The two plants sensibly enhance each other's attractions, the vigour of form and brilliant gold of the large masses of marigold being intensified to the eye and mind by the proximity of the light and graceful growth, the delicate foliage and flowers of the lady's-smock, a grace and delicacy that is the more appreciated from the contrast with its sturdy neighbour. The lady's-smock will ordinarily be found in flower by about the first week in April, though it may sometimes be met with at a considerably earlier date; it continues in blossom until about the middle of June.

The lady's-smock is also less commonly known as the

bitter-cress or cuckoo-flower. Its commoner name is sometimes written ladies'-smock, at first sight a not very marked difference, but a difference sufficient to build up a second theory of the origin of the name upon. The plant, we are told by some of the older writers, is called lady's-smock because, like many other graceful and delicate plants, it was dedicated in mediæval times to the Virgin Mary, to whom the title of Lady was largely given, as, for example, "Our Lady of good counsel," "Our Lady of succour," "Our Lady of mercy," and to these many other such titles might be added. This prefix is by no means uncommon; thus the parasitic dodder is also known as lady's-lace, the harebell as lady's-thimble, in obvious allusion to the form of the flower; lady's-finger, lady's-mantle, and lady's-slipper are other instances. The beautiful little ivy-leaved toadflax is also, by the Italians, dedicated to the Virgin under the name "Erba della Madonna." Ladies'-smock, on the contrary, we are told by other authorities, has no religious significance involved in it, but is only given to the plant because the meadows whitened over with its blossoms recall their appearance when at another time they are covered with the bleaching linen of the household, made by the busy fingers of the fair members of the family, not spinsters in name only but in very deed and most actual fact. Cuckoo-flower would not be at all a bad name for the plant, if confined to it, but unfortunately in popular parlance two or three other plants that also flower about the time the cuckoo arrives have had the same name bestowed on them, and a considerable amount of difficulty in identifying the actual species intended has therefore from time to time arisen. The name given in many botanical works, bitter-cress, points at once

to its relationship with the watercress and other members of the same family, and to the pungent flavour of the plant when employed, as it sometimes is, in salads, the plant having formerly had a great reputation as an antiscorbutic. The plant is still, in many parts of the Continent, largely employed, and big bundles of it may be seen amongst the other vegetables in the public markets. In olden time it was considered a potent remedy in hysteria, epilepsy, and many other diseases; hence the name bestowed on it, *Cardamine*, a name derived from two Greek words signifying the heart and to overpower. Its near ally, the watercress, is, one need scarcely say, largely employed as an article of diet, and authorities assure us that the chloride of potassium and iodine it contains render it distinctly valuable as a food substance.

The lady's-smock is a perennial, and each year throws up a stem some twelve to eighteen inches high. The leaves that spring from the stem are pinnate in character, having numerous lateral leaflets. The radical leaves have the same general arrangement, but the leaflets are much fewer in number and considerably broader, and the terminal leaflet is much larger than any of the others. The radical leaves do not, like the stem leaves, catch the eye at a cursory glance, but must be sought amidst the grass, and can only be well seen by pulling up the entire plant. The flowers are large and attractive, and composed of four petals, arranged in a cross form—a conspicuous feature in the natural order to which the plant belongs—which is hence termed the crucifer or cross-bearing family. The blossoms are at times met with of a pure white, though more ordinarily of a pinkish purple, hence Shakespeare's line—

"Lady's-smock all silver white,"

is scarcely as accurate as most of his descriptions of nature are if we examine an isolated plant, though as he speaks of this and other flowers as painting the meadows, it would rather appear that he refers to the general effect produced by the mass of plants spread over the pasture when the pale tinge of colour is lost in a general sense of white, and in this sense the line may very well stand.

As the flowers pass away they are succeeded by pods an inch or so in length. There are three other species of bitter-cress, but the one figured is that most commonly met with.

WALLFLOWER.

WALLFLOWER.

Cheiranthus Cheiri. Nat. Ord., Cruciferæ.

THE wallflower in its cultivated state will, no doubt, be perfectly familiar to all our readers, but it may not have been the happiness of all to see it in its native habitat, the crumbling walls of some old ruin. While most plants delight in a good body of soil, others seem to thrive under the most adverse conditions, and amidst the cracks in the masonry of some old abbey, where we should expect the lack of earth, the insufficiency of moisture, the scorching sun, and the fierce rush of the breeze to render existence impossible, we often find a perfect garden. We have in such positions seen the wallflower, the bugloss, the snapdragon, harebells, the stonecrop, and even such plants as the elder and the dog-rose, growing in wild profusion. To this short list many other flowers might be added, and the stone fences that are so common in some parts of the country yield equally "happy hunting-grounds" for the botanist and lover of plants. Amongst

these lovers of plants we may include one of our greatest poets, and one perhaps second to none in his appreciation of natural beauty—Scott—as we recall his lines—

> "The rude stone fence, with fragrant wallflowers gay,
> To me more pleasure yields
> Than all the pomp imperial domes display."

The fragrance of the wallflower has led to its cultivation; but though the garden flowers have, by cultivation, departed somewhat from the wild type, the petals being larger and more highly and variously coloured than in the child of nature, the wildling has a sturdy vigour of growth that the more sheltered garden plant lacks. As the "flower of the solitary place, grey ruins' golden crown," it has its praises sung by Moir in a passage that is, unfortunately, too long to quote, yet too good to mutilate. Its home and its fragrance are concisely brought before us by Burns, in one of his poems, where he refers to

> "Yon roofless tower,
> Where wallflowers scent the dewy air."

The wallflower is one of our earlier plants, and should be looked for in May and the beginning of June—

> "When apple-trees in blossom are,
> And cherries of a silken white,
> And kingcups deck the meadows fair,
> And daffodils in brooks delight;
> When golden wallflowers bloom around,
> And purple violets scent the ground,
> And lilac 'gins to show her bloom,
> We then may say the May is come."

The common name of the plant, wallflower, is, of course, bestowed upon it from its being so essentially a lover of old walls, but we sometimes find it referred to as the gilliflower, or gillofer, a corruption of the French *giroflier* and

Italian *garofano*. We need scarcely remind any who read these remarks that the etymology of our language was in mediæval times in a very chaotic state, and we find the plant appearing in various old authors as the gilofre, the gyllofer, jereflouris, and gariofilus, all more or less corrupt renderings of the Latin *Caryophyllum*, a name bestowed on it from its clove-like odour. The name was, however, originally conferred on the true clove, a species of pink; and while some of our earlier writers refer to this latter plant as the gillofer, later authors have transferred the name to the wallflower.

The botanical name, *Cheiranthus*, is not altogether clear in meaning. It was bestowed upon the genus by the great Linnæus, and the motive that influenced his choice seems to have been lost. Some authorities boldly go to the Greek, and taking the words in that language which stand for "the hand" and "a flower," consider that the matter is settled, that the fragrance and beauty of the flower are such that one willingly carries it in the hand and forms it into nosegays, much in the same way as we see by the Egyptian mural paintings in the tombs that the lotus was a favourite flower amongst that ancient people. We see the Egyptian ladies carrying it in their hands at social gatherings or adorning themselves with chaplets of the blossoms. Such a flower might truly be called *Cheiranthus*, but the term seems somewhat far-fetched as applied to the wallflower, which might share it at least equally appropriately with many others—the violet, the primrose, the cowslip, and other rural favourites. Another explanation of the term is based on the Arabic word *Kheyry*. In mediæval times the Arabic authorities are often quoted in science and medicine, and we find that the name we have

given was applied by them, not, indeed, to the wallflower, but to a somewhat similar plant, bearing red and richly-scented flowers. The Greek *anthos* was added to this, to make it harmonise in appearance and sound with the other botanical names springing chiefly from Greek and Latin sources. We are asked further to believe that the early writers, resenting, as they well might do, this barbarous admixture of two languages in the one word, found in the Greek word *cheir*, "the hand," something very equivalent in sound to the Arabic, and so "kheyry-anthos" grew into "cheir-anthos."

The wallflower does not seem to have attracted the notice of the earlier herbalists so much as many other equally common flowers did, though we should have imagined that in their quaint hunting after analogies the plant which beautified the ruin and adorned the ravages of time would have been held fit application for the decaying human frame. We may see something of this, perhaps, in Gerarde's suggestion that "the oyle of wallflowers is good to be used to annoint a paralyticke." According to another old author, "it stayeth inflammations and swellings, and comforteth and strengtheneth any weak part."

YELLOW HORNED-POPPY.

THE YELLOW HORNED-POPPY.

Glaucium luteum. *Nat. Ord., Papaveraceæ.*

SCARCELY any spot, however unpromising it may appear, but furnishes some point of interest to the lover of plants. The surf-beaten rock is fringed with sea-weeds of beautiful form and colour; the deepest recesses of the forest are tapestried with the over-hanging fronds of graceful ferns, and studded with fungoid growths of the quaintest forms and richest colouring that flourish in the congenial damp and gloom. The bleak moorland, again, swept by every blast, is knee-deep in purple heather; and the bare reaches of sand-hill or pebbly beach that fringe our coast are the chosen home of some few plants that thrive where the fierce winds of ocean and the general sterility seem to forbid all hope of finding any floral life, or anything higher in the scale of vegetable forms than some perishing sea-weed torn from its rocky resting-place beneath the waters, and cast ashore to die by the rolling waves, that had heretofore rocked it in their

rough embrace, and been its life and stay. It is in such an uninviting spot as this that the yellow horned-poppy, the plant represented in the present plate, is seen in perfection, growing in great tufts among the stones of the beach, or finding a home in some crevice of the rock, recalling to our minds the fine poetic imagery of one of the greatest poets that have ever lived :—"The wilderness and the solitary place shall be glad for them; and the desert shall rejoice, and blossom as the rose."

The yellow horned-poppy is found in flower from June to October. It was the *Chelidonium glaucium* of Linnæus and the early botanists, but in all modern systems of plant classification and nomenclature it is the *Glaucium luteum*. The generic name is derived from the glaucous, or sea-green hue of the foliage and stems. The Greek word *glaukos*, blue or grey, originally gleaming, very well describes the fine bluish-green bloom that is seen on the surface of the leaves. The specific name *luteum* refers to the colour of the flowers; it is the Latin word for yellow.

The plant is an annual, very sturdy in growth, attaining to a height of from one to two feet, but covering a considerable space, from the number of its widely-spreading branches and long, straggling pods. The leaves are very thick in texture, to enable them to bear the brunt of the exposed situation in which the plant is found, and the veining is almost lost to sight unless the leaves are held in such a position as to allow the light to pass through them. The lower leaves are stalked and divided into a series of lobes, the whole surface being covered with short hairs, while the upper leaves clasp the stem, and are much simpler in form, and smoother in appearance and to the touch, though even these are what is botanically termed

scabrous in character, a term employed to define a certain roughness of texture, arising from the presence of a number of little harsh inequalities in the surface. The flowers spring on short stems from the axils of the leaves; they are large in size, and handsome both in form and colour, but only last in perfection a very short time, as the petals one after another very soon fall away. The flower has four petals, and two sepals. As in the case of the common scarlet poppy, already referred to, the sepals are thrown off on the expansion of the blossoms. The stamens are very numerous, and closely surround the conspicuous stigma, occupying the centre of the flower. The flowers are succeeded by the very characteristic pods that give the plant its common name. The limited space at our disposal has prevented our doing anything like justice to them in our illustration. The flowers are of the natural size, but we have had to rest satisfied with representing a pod in an early stage of its development. These pods ultimately grow about a foot long, and when some twenty or so of them, fairly well grown, are met with on a plant, they give it a peculiarly quaint effect. From the long time that the plant continues blossoming it will almost always be possible to find the flowers and pods in all stages of development, and to trace the pod from the specimen where it is just beginning to lengthen over the heads of the stamens, right up to the fully-matured example that requires a foot-ruler to do justice to its proportions.

The only other species in the genus is the *G. Phœniceum*, or scarlet horned-poppy. The flowers are scarlet, as the name imports, each petal having a black spot at its base. In most other respects it is not altogether unlike the yellow horned-poppy. It flowers in June and July, but is so very

rarely met with in England, its claim to a place in our flora at all being even contested, that it is needless to dwell at any greater length upon it.

In speaking of the subject of our illustration, it must always be referred to, not only as the yellow, but also as the horned-poppy, as we have another yellow poppy, the *Meconopsis Cambrica*, or Welsh poppy. Its generic name is derived from two Greek words, signifying poppy and resemblance. The flowers are large and of a brilliant yellow. It is one of our rarer plants, and is chiefly to be looked for in mountainous districts. It is, however, a curious fact that within a mile or two of where we write these lines, full fifty miles from the coast, and with only such an approach to mountains as the great chalk downs of Wiltshire present, fine plants of both these yellow poppies flourish year after year. They are, we need hardly add, in the gardens of friends of botanical tastes, where they are duly appreciated and cared for. The yellow Welsh poppy is a perennial.

SHEPHERD'S NEEDLE.

SHEPHERD'S NEEDLE.

Scandix Pecten. Nat. Ord., Umbelliferæ.

THE subject of our present illustration is one of the characteristic flowers of the corn-field, though, as it lacks the brilliancy of the scarlet poppy, the intense blue of the corn-flower, or the widely-spreading golden rays of the marigold, it is by no means a conspicuous feature in the flora of the harvest-field. It is abundantly met with in most parts of England and Ireland and in the southern districts of Scotland, and though in an especial degree found in corn-fields, is not exclusively confined to them, but may at times be found in other crops or on waste land. Though it is but a small plant, the abundance with which it occurs makes it at times injurious to the crop, and it may be regarded as one of the farmer's pests, as no use for it has ever been discovered. The long beaks to the seed-vessels are a very curious feature, and the novice in botanical studies might almost be excused for taking it to be a species of crane's-bill.

The shepherd's needle is an annual, and flowers during June, July, and August, the seeds ripening with the corn, though we may often find some plants coming into blossom in a field when others are showing the seed-vessels.

The root of the shepherd's needle is slender and elongated, whitish in colour, and throwing off a few thin and long lateral fibres. The stalks rise, one or more from the same root, to a height of from four inches to about a foot. They branch and spread a good deal, and are more or less covered with hairs. Unlike many of the family, they do not thicken very perceptibly at the joints. The lower parts of the stalks are often entirely crimsonish-purple, or more or less striped with lines of that colour. The leaves of the shepherd's needle, like those of the carrot, hemlock, fennel, and many others of the umbel-bearing order, are deeply cut up into five segments. At the base of their stalks they form a sheath, which partially encloses the stem from whence they spring. The shape of the foliage may be better understood by a glance at our illustration than by any attempt to describe it, and more especially as in a work of this kind we must either eschew botanical technicalities or else avail ourselves of them at the cost of afterwards going into lengthy explanations of their significance. The general effect of the foliage is a bluish or greyish-green, very deeply divided and intricate-looking mass.

Flowers are said to grow in an umbel when all their stalks spring from one point, and it often happens that these lesser stalks again branch, and have each of them a bunch of flowers at their extremity. When each stalk, as in the cherry or in the flowering rush which we shall

later on figure, bears only one flower, the umbel is said to be simple, but when the other arrangement is seen the umbel is termed compound. The umbel of the shepherd's needle is usually only composed of two diverging stems, though we sometimes find three: one example of each of these is seen in our figure, the upper one having three rays and the lower two. The small umbels that surmount these usually bear about half-a-dozen flowers each. Where the rays of an umbel spring we ordinarily get a ring of leaves or bracts, and this is called botanically an involucrum; and when the umbel branches again we get a second ring, and this is termed an involucel. This may sound alarmingly technical to some of our readers, but we are obliged to go thus far because we could not else point out an interesting feature in the plant. In the shepherd's needle the involucrum is wanting, though some of the upper umbels, as in our figure, spring from the axil of the sheath of the upper leaves, while the involucel is very large. It may be seen immediately below the flowers. It is much larger in proportion than we find it in most other plants, and the interesting points to notice are its size, the fact that the general involucre is altogether wanting, and the smallness of the number of the rays that go to make up the umbel. A comparison with almost any other umbel-bearing plant will at once illustrate and enforce these points. The order includes such well-known plants as the celery, parsley, carraway, fennel, parsnip, carrot, and hemlock, together with many others. The length of the beaks of the seed-vessels, and the large and bifid leafy bracts of the involucel, at once distinguish the shepherd's needle from all the other plants of the order, though a strong family likeness runs through them all, and

renders it a difficult family for the novice to deal with. The seed-leaves of the present plant are very long on their first appearance above ground.

The generic name, *Scandix*, is derived from the Greek word for some plant of this order, but we cannot now determine which particular plant was intended by those who first bestowed the name. According to Dodonœus, writing in 1578, "Scandix eaten is good and wholesome, and in times past hath beene a common herbe amongst the Greekes, but of small estimation and value, and taken but onely for a wild wurt or herbe. Aristophanes in times past, by occasion of this herbe, taunted Euripides, saying that his mother was not a seller of wurtes or good potherbes, but onely of Scandix, as Plinie writeth." Pecten is the Latin word for a comb, and many of the old writers call the plant Pecten Veneris, or the Comb of Venus. It is also called Beggar's needle and Crow needle, the long beaks, "muche like to smal packe needelles," evidently suggesting these names.

RED MEADOW CLOVER.

RED MEADOW CLOVER.

Trifolium pratense. Nat. Ord., Leguminosæ.

FEW of our plants probably will be a more familiar wild flower to our readers than the one here figured, for it springs up abundantly by almost every road-side, and thrives in every meadow. It may be looked for—if indeed such an expression be admissible in the case of a plant that needs no searching after—from May until September. Its specific name, *pratense*, refers to its home in the meadows and pasture-lands; and in France, too, it is the *trèfle des prés*. Its Welsh name is *Meillionen goch*. The common name, trefoil, and the generic name, *Trifolium*, each testify to the same habit of growth—the combination of three leaflets into one leaf. There are from fifteen to twenty species of trefoil to be found in this country, of which half are

pasture plants. Shakespeare gives the word as "triffoly," and other old writers have "trifolie," and other slight deviations from the root-word. In some old herbals it is the "triafoliola." The other familiar name, clover, has two distinct derivations accorded to it, and either is so far interesting that one can only regret that a second should arise to throw a shade of doubt upon the first. "How happy could I be with either, were t'other dear charmer away," to quote a well-known line from perhaps a less well-known source, the "Beggar's Opera" of John Gay. The plant was by the Anglo-Saxons called "cloeferwort," on account of its deeply-cleft leaves; and as the Anglo-Saxon words, though they vary to "clœfer" and "clœfra," still keep closely in sound and sense to the one we have first quoted, we may be well content to see in these the origin of our modern word. Prior, on the other hand, in his excellent work on the popular names of British plants, finds a significance in the Latin word *clava*, a cudgel or club, though in what respect the plant resembles a club he does not mention. Granting, however, this foundation, which he supports by a reference to the "clava trinodis," or three-knotted club of Hercules, he indicates the curious fact that our "clubs" in playing-cards are trefoils in form. Those who find themselves still open to a third theory, may perhaps accept the fact that the plant, often called Dutch clover, is largely cultivated among us, and that the seed is chiefly imported from Holland, in which country the plant is called *klaver*. The red clover was first introduced into notice as a fodder plant by Sir Richard Western, our ambassador to the Low Countries, in the year 1645, but it seems to have been long received with but little favour; thus, in turning to Martyn's "Flora Rustica," published in 1792, we find the following

passage:—"It has been long under culture in Flanders and other countries, and has at length surmounted inveterate prejudice in most parts of these kingdoms. Though it was strongly recommended, and shown experimentally to be excellent in the sixteenth century, yet at the end of the seventeenth it was asked what could be the reason why the great advantage got in Staffordshire and Worcestershire by sowing of clover, can scarce prevail with any in Cheshire and Lancashire to sow an handful upon the same kind of land." The red clover is by some agricultural writers called "marl grass." It thrives upon almost any kind of soil, but best upon clay and loam. It is often sown with corn in spring, and allowed to grow on after the cereal is reaped, and may very profitably occupy the ground alone the following year. Twenty pounds of seed an acre will yield about ten tons of green food, or two to three tons of excellent hay. As a green crop it needs to be sparingly employed, as stock will almost too readily consume it, to their subsequent injury, and its succulent nature necessitates careful drying before stacking as hay, or it will heat and presently ignite. Ray and some of our earlier botanists distinguished the clover of cultivation as a different species from that of the road-side; but there is no inherent distinction; and any slight difference of appearance or extra luxuriance springs from the results of culture, such as the careful selection of seed, richer soil, and such like influences. By some old writers the plant is called "meadow honeysuckle," not from its resemblance to the well-known plant of that name, but from the same reason that caused the true honeysuckle to receive its name, as any of our readers who will take the trouble to pluck a flower off either plant and taste it will readily perceive. Country children often pick

the flower-heads for the purpose of thus extracting the sweetness from them; and in the district where we write the white dead nettle too is called a "honey-suck."

Culpepper, in his "Herbal," speaks of the meadow clover as "so well known, especially by the name of honeysuckles, that I need not describe it." A clover field in full blossom is not only a beautiful sight, while filling the balmy air of summer with the fragrance of its countless blossoms, but it is a scene of unwearying industry and rapturous enjoyment, as the bees by thousands are rifling its sweets, and the butterflies, more numerous there than anywhere else, sip the nectar from the tubular flowers. Many a "clouded yellow" in our younger days have we ardently pursued as it danced over the purple sea of blossom.

"The leaues boiled with a little barrowes grease, and vsed as a pultis, take away hot swellings and inflammation. Pliny writeth, and setteth it downe for certaine, that the leaues hereof do tremble, and stand right up against the comming of a storme or tempest."

ANEMONE.

THE ANEMONE.

Anemone nemorosa. Nat. Ord., Ranunculaceæ.

AS the winds of March sweep through the copse and along the hedgerows, the delicate anemones or wind-flowers expand their blossoms to the breeze; and the older writers associated the March winds with the opening flowers, and made the one dependent on the other. "The coy anemone, that ne'er uncloses her leaves until they're blown on by the wind," derives even its name, which is Greek in its origin, from this fabled association with the breezes, for Pliny says that it was so called because it never opened its blossoms but when the wind was blowing. Culpepper, we see, speaks also of the anemone as "called wind-flower, because they say the flowers never open but when the wind bloweth. Pliny is my author; if it be not so, blame him." Culpepper's language, we may mention, is often more expressive than polite, and he

has immense faith in himself. In his chapter on the present plant, for instance, he strongly advises the roots of the anemone to be chewed in the mouth, as "it purgeth the head mightily, and is, therefore, good for the lethargy. And, when all is done, let physicians prate what they please, all the pills in the dispensary purge not the head like to hot things held in the mouth."

The anemone is one of our most graceful wild plants, its fresh green leaves and snow-white blossoms rendering it a fit companion for the purple hyacinth, the nestling, sulphur-tinted primrose, or the golden stars of the little celandine. Men of science retain the old name because they say its flowers appear so fragile as they resist the keen winds of March, but the poets naturally side with the old myth; they more often call it the wind-flower. Bloomfield, for example, writes:—

"Now daisies blush, and wind-flowers fill with dew;"

and in Bryant's fine poem on the Autumn, we find the following lines:—

"The wind-flower and the violet, they perished long ago,
And the briar rose and the orchis died amid the summer's glow."

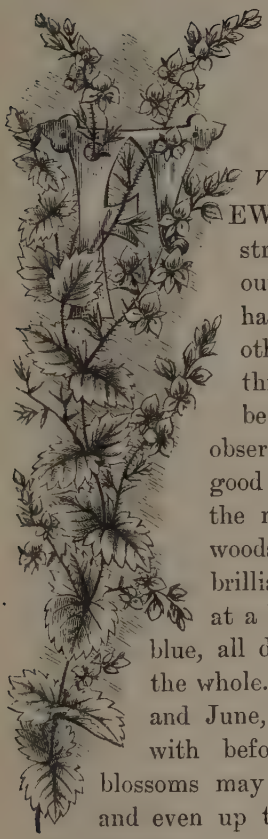
The wood-anemone is seen early in the spring, the copses, woods, and sheltered hedgerows being whitened with its countless blossoms. In fine, clear weather, the flowers are fully expanded and face the sun; but when its vivifying rays are withdrawn at the approach of evening, or overcast by the rain-cloud, the flowers close and hang down, thus preserving the inner delicate parts from injury, and serving as a very good natural barometer at the free service of those who wander "where, thickly strewed in woodland bowers, anemones their stars unfold."

Despite the poetry attaching to the plant, it shares fully in the acrid and bitter nature of almost all the plants in the order Ranunculaceæ, an order containing the deadly wolf's-bane or monk's-hood, the hellebore, and the fiery and blistering buttercups; and we should certainly ourselves hesitate to resort to the remedy of chewing its root. The specific name of the anemone is *nemorosa*. The student who translated *hors de combat* as war-horse, would probably tell us that this means that the plant has nothing of the rose about it; but other authorities, and those too of more weight, point us to the Latin word for woody. The *Anemone nemorosa*, though much the commonest of all our English species, is sometimes more definitely specified for the sake of distinction as the wood-anemone, while in Wales it is the "frithogen y goedwig," and in Ireland the "nead coilleah." Some few of the old herbalists call the anemone the wood-crowfoot, because its leaves resemble in shape those of some species of crowfoot. The name is, however, an unfortunate one, as amongst the crowfoot or buttercup family there is one, the *Ranunculus auricomus*, a plant we have already figured, and a dweller in the woods and copses, that has a much greater right and prior claim to the name. The anemone, if we may believe the stories of the old Greek poets, had a most romantic origin, being fabled to have sprung from the tears shed by Venus over the dead Adonis :—

"Alas the Paphian! fair Adonis slain!
Tears plenteous as his blood she pours amain.
But gentle flowers are born, and bloom around,
From every drop that falls upon the ground:
Where streams his blood, there blushing springs the rose;
And where a tear has dropped, a wind-flower blows."

Besides the wood-anemone we have the *A. pulsatilla*, or Pasque-flower, so-called from its flowering about the Paschal season or Easter. It may be found occasionally on open chalk downs, but it is by no means common. Its flowers are large, violet-purple in colour, and very handsome. Besides these two we occasionally find the blue mountain-anemone, or *A. apennina*, and the yellow wood-anemone, or *A. ranunculoides*; but neither of these can claim to be truly indigenous, though they have at times strayed from cultivation and established themselves in our woods. The first of the two has large and pale lilac-blue flowers, and when growing in masses has a very beautiful effect; the second we do not remember to have ever seen. The numerous varieties of anemone grown in our gardens owe their origin to south and east European species more or less transformed by cultivation and the florist's art.

GERMANDER SPEEDWELL



THE GERMANDER SPEEDWELL.

Veronica Chamædrys. Nat. Ord., Scrophulariaceæ.

FEW persons will regard entirely as a stranger the beautiful plant selected for our present illustration, for though perhaps scarcely so freely met with as some others, it is very generally distributed throughout the country, and will hardly be unknown to any persons who care to observe such things if they have had the good fortune to be in the country during the months of spring. At this season the woods and hedge-banks and roadsides are brilliant with its beautiful blossoms, telling at a little distance as large masses of deep blue, all detail being lost in the rich effect of the whole. The plant is at its best during May and June, though it may occasionally be met with before the middle of April, and stray blossoms may be found all through the summer, and even up to chill October. The aspect of the plant as the summer goes on is, however, by no means so elegant as in the earlier weeks of its appearance, as the lower flowers of the racemes wither away, and are succeeded by the capsules containing the seeds, and, as the stems elongate, the general effect is

poorer, a certain wild, straggling look, and thinness of appearance being too evident to be altogether pleasing. The plant, like most other wild flowers, is rather variable, some specimens being much larger than others, though the smallness of the less developed specimens renders them no less beautiful. In one plant we gathered while looking out examples for our plate, the total height was less than four inches, and yet in a space no larger than a shilling would cover it had seven fully expanded blossoms, besides others in various stages more or less forward. The plant is the *Veronica Chamædrys* of the botanist. Whatever force of meaning was originally supposed to rest in this name would now appear to be lost, for while some writers think the name to be eastern in origin, and to signify good remembrance, others trace in the flowers some resemblance to a face, and think the name to be derived from the Greek words signifying sacred and a picture, in allusion to the monkish legend of St. Veronica, who wiped the drops of agony from the Saviour's brow with her handkerchief, which ever after bore the impress of His features. The meaning of the common English name is equally obscure. In some parts of the country the children call the plant bird's eye, probably from its brilliant colour, the pupil of the eye of the jackdaw being, for example, very much the same tint, and probably other birds may supply a further optical proof of its fitness as a name for the plant, though we cannot ourselves at the moment recall a second example of the occurrence of the colour. The flowers occasionally are of a somewhat pinkish purple, and are more rarely met with almost or entirely white; in fact, almost all plants, if they have any tendency at all to depart from the normal and typical colouring, will at times be found with

white blossoms—the hyacinth, bugle, heath, herb-robert, and many other plants afford an illustration of this fact in plant colour. In some cases possibly insufficient nutriment may have produced the effect, but ordinarily one notices no circumstance that accounts satisfactorily for the deviation from the ordinary colouring. The stem is weak, and the whole plant fragile, drooping very quickly when gathered. The leaves are very shortly stalked, very deeply furrowed by the veins, and deeply serrated. The inflorescence is racemose in character, the flowering stems springing from the axils of the leaves; the flowers are very fugacious, hence it is a most unsatisfactory plant to gather, as on arriving home with the treasure it will ordinarily be found that something like nine-tenths of the blossoms are either entirely missing, or are very quickly lying scattered on the table on which the glass containing the bunch has been placed.

The names of plants, both those assigned by science and those in daily use by the unlearned, will often repay analysis, though some of our readers may have a feeling that the subject cannot but be dull and uninteresting, and will further feel justified in their opinion by the authority of our great poet, whose lines, "What's in a name? That which we call a rose By any other name would smell as sweet," supply them with an apt quotation. Still, the subject is not altogether devoid either of interest or practical utility, for though some of the names of our English plants cannot now be satisfactorily analysed, there remain many which, when their significance is understood, may yield considerable information, some by their associations recalling the festive customs of the so-called "good old times"; while others again appeal to the

poetical element in our nature, or point out a practical domestic or medicinal service rendered. Names based upon poetical associations form but a small class. The first instance which naturally rises to our mind is the pretty little blue forget-me-not with its well-known legend. Some of our readers will probably, however, be surprised to learn that that plant has only borne that name for about fifty years. In two books published in the sixteenth century the germander speedwell is termed the forget-me-not, while most writers for a period of more than two hundred years apply the name to a very different plant, and from a very different motive, the ground pine being the plant generally called by that name, on account of the exceedingly nauseous taste which remains in the mouth if any one is so imprudent as to taste the stem or leaves. The speedwell, which has at times by the poets and other writers been called a forget-me-not, receives both these names from the fragile nature of the plant; hence "speedwell," a common form of valediction in the Middle Ages, and almost equivalent in meaning to our more modern "farewell" or "adieu" would seem especially appropriate to this tender little flower. Sixteen other species of speedwells, all members of the same botanical genus as the present plant, may be more or less commonly met with.

GARLIC-MUSTARD OR SAUCE-ALONE.

GARLIC-MUSTARD.

Alliaria officinalis. Nat. Ord., Cruciferæ.

SOME little care will be necessary to prevent a mistake arising in one's mind between the present plant and the *Sisymbrium officinale*, or common hedge-mustard. Both plants are equally common, and both must figure in our series. The one plant has small yellow flowers, and the other considerably larger white ones; but they are very nearly allied botanically, and some writers have placed the two plants in the same genus. No one, however, could possibly mistake one for the other if he saw them both together, as the similarity is verbal alone. Our present plant is called the garlic-mustard, and the hedge-garlic, while the other is the hedge-mustard. Hedge-garlic is not by any means a happy title, as the true garlic, a plant shown elsewhere in our series, is also a dweller in the hedgerow, and is wholly different from this in every way.

The tall stems and great heart-shaped leaves of the garlic-mustard are conspicuous on almost every hedge-bank during the early summer, and the plant may be readily distinguished from anything else at all like it by its strong garlic-like taste and odour. On this account it was at one time largely employed in the rustic *menu*, either eaten *au naturel* with bread and butter, or boiled as a pot-herb. We have heard, too, of its being fried with herrings and bacon, and in Germany it is largely eaten as a salad and anti-scorbutic with salt meat. According to Bautsch, it has been found useful in tanning, but whatever value it may possess in this way its being inferior to oak-bark and other materials will always prevent its being of any practical service. Horses and sheep refuse it, but cows will eat it, though it is very undesirable that they should, unless their owner is so partial to garlic that he considers it a desirable flavouring to his milk and butter.

The strong garlic-like odour of the plant is expressed not only in its popular name, but in the generic title as well, *Alliaria* being derived from *allium*, the Latin word for garlic. Ray, in his "Synopsis Methodica Stirpium Britannicarum," published in the year 1724, calls it the *Hesperis allium redolens*, a title equally redolent of the garlic. Another popular name for the plant is the sauce-alone. It has been very naturally suggested that this name was given to the herb from the fact that its use in homely cookery rendered any other flavouring unnecessary; but as we find that the true garlic in Spain is the ajo, in Portugal the alho, while in France it is called ail or ailloignon, and in Italy aglio and aglione, it is probable that we are again confronted with a reference to its garlic-like odour, and that sauce-alone is after all sauce-garlic.

Another common name for the sauce-alone or the garlic-mustard is the Jack-by-the-hedge; and in some old herbals it is the *pes asininus* or donkey's-foot, a name bestowed on it from the shape of the leaf, but which is by no means appropriate, and which probably would never have been thought of had there not been already a colt's-foot, a bird's-foot, and the like. The plant has by some more recent authorities been classed in the genus *Erysimum*, and by others in *Sisymbrium*. These genera are closely allied botanically with that in which it is now placed, and we cite them both, as very possibly our readers who may desire to know more of the plant might in some books find it under one heading, and in others under another.

The garlic-mustard appears to be sometimes an annual, but it is more ordinarily biennial. The root is long, white, tapering, forked, and furnished with numerous lateral fibres. The stalk is upright, and from two to three feet high, round, smooth, often purplish at the bottom, branching at the top, but having as a whole a bold and erect growth. The lateral branches are few in number, arranged alternately, and partake of the general upright character. In young plants there are often no lateral shoots at all. All the leaves are stalked, the upper ones being on short stems and the lower on much larger ones; all, too, are coarsely toothed, but they vary somewhat in shape and size according to their position on the plant. The upper leaves are small, and may be described as of a pointed heart-like form; while the lower are much larger, and of a very much more rounded heart-like shape: all are very deeply veined and somewhat wrinkled. The flowers are white, growing in a cluster on the summit of the stems,

each being composed of four petals. The stamens are six in number, and of the familiar type seen in all the cruciferous plants. The pods that succeed the blossoms are a very prominent and noticeable feature; they vary in size from the lowest scale of immature development to two inches or more in length. These pods are stiff and cylindrical, and each contains numerous small brown shining seeds. The mediæval herbalists were profuse in their praises of the medicinal virtues of the garlic-mustard, applying it internally as a sudorific, and externally as an antiseptic, but this faith in its efficacy is, so far as we are aware, now entirely a thing of the past.

BLACK BRYONY.

THE BLACK BRYONY.

Tamus communis. Nat. Ord., Dioscoreaceæ.

BY no means conspicuous as regards its flower, the present plant will probably be yet well known to most of our readers—to all who, with any appreciation of the beauties of nature, have wandered along our hedgerows in the long days of summer—for the foliage of the black bryony is one of the most graceful and most ordinary draperies that fringe and festoon the plants of the hedge or copse. The leaves are ordinarily very considerably larger than those the exigencies of our space would here allow us to represent; a breadth of six inches or so would probably be a fair average for an ordinarily developed leaf, and those we have selected have therefore been taken from near the end of the spray. The long trailing stems are thickly covered with the great heart-shaped leaves, and one of its most beautiful features, noticeable on pulling down some six feet of it from its attachment, is the delicate gradation

of form and size from the great leaves of the lower portion to the lighter forms near the extremity of the stem. The last leaves are often not more than an inch in length. The brilliant gloss of the leaves is another feature that will at once attract the eye; the young leaves near the extremities are a somewhat pale and yellowish green, and have little of this polished surface, but the main bulk of the foliage—all that most readily catches the eye—is of a dark bluish-green, and has the glossy surface that is so characteristic a feature of the plant, and that makes it very noticeable amongst the other foliage up which it climbs or that surrounds it in the hedgerow or coppice.

The black bryony is the *Tamus communis* of botanical nomenclature. It is unfortunate that another of our English plants shares with this species the name of bryony, as thereby a slight amount of confusion from time to time arises. The present species is always termed the black bryony, in contradistinction from the other species, the white bryony or red-berried bryony, a plant that we propose to figure later on. A moment's glance at the two illustrations will at once suffice to show how different in every way the two plants are. The word bryony is derived from a Greek word signifying to shoot or grow rapidly, and is fairly expressive of both these quick-growing species; but it is not the less a misfortune that a name which might on this ground be equally well bestowed on a dozen plants, should in any case have been given to more than one. The generic name *Tamus* is given to the plant from the belief that it is the same as that referred to in the works of Pliny under the title of *Uva Taminia*. The meaning of the specific title is too self-evident to need any explanation.

The roots of the black bryony are very large and fleshy; like most other things, they were, in the Middle Ages, accredited with healing virtues. They were ordinarily applied for rheumatism, but their irritant and acrid nature make them dangerous things to experiment with. The stems are very long, and twine amongst the branches of other plants. The flowers are greenish, and in character diœcious—*i.e.*, the stamens and pistil are in different flowers, the blossom of each plant being all of them of either one or the other form. The specimen represented in our illustration is a male, or stamen-bearing plant. The flowers are somewhat different in form, and the staminate blossoms are borne on longer stalks than the pistillate. The six little bright yellow dots in the centre of each of the flowers figured are the anthers of the stamens, the parts that in this, as in many other plants, are clear yellow in colour and covered with a dust-like substance called pollen. The flower is what is termed by botanists a perianth—a term applied when the outer ring that represents the calyx is very similiar both in form and colour to the next series of parts. In the buttercup, the corolla is bright yellow, the calyx green, and there is no resemblance between the petals and the sepals; but in many flowers, as in the lily, this difference is not so distinctly marked, and the term perianth is used to denote such a feature. In the flowers of the black bryony it will be seen that the parts of the corolla and calyx are quite alike in colour, and almost similar in form. The berries that succeed the pistillate blossoms are large, and of a deep crimson colour; the term red-berried bryony, applied to the other species, is therefore not in itself distinctive—it, in fact, points to a feature of resemblance, not one of difference; though, as the name

is only applied to the other species, the *Bryonia dioca*, it becomes, by usage only, a means of distinguishing the plant intended. The great difference in the forms of the leaves is the most marked characteristic, and when that point is once remembered, the veriest novice cannot possibly err.

In spite of its specific title, *communis*, it is much commoner in some English localities than in others; but in both Scotland and Ireland it is a plant altogether unknown. It is not only the solitary English species in the genus, but the genus to which it belongs is the sole English genus in the botanical order; it is therefore the only representative we have of the *Dioscoreaceæ*, an order containing many species, but chiefly tropical in habitat. The yam is perhaps the best known of these.

CROSS-LEAVED HEATH.

CROSS-LEAVED HEATH.

Erica Tetralix. *Nat. Ord.*, *Ericaceæ*

INGLED with the purple heather, *Erica cinerea*, and the ling, or common heath, *Calluna vulgaris*, two familiar wild flowers we figure in our series, we ordinarily find the cross-leaved heath, the subject of our present illustration. It is found all over Britain, and is particularly common in the west, and is more especially to be met with on heaths and moors where the ground is somewhat moist. Though smaller than the other species, and not so gregarious—if we may apply that word to a thing inanimate—it contributes its share in decorating and enlivening the waste. The plant is a perennial, and should be looked for during July and August by those who would admire its delicate wax-like bells, for this species, though not applicable to so many useful purposes as the others, is not inferior to any one of them in the beauty of its flowers. These in general are of a pale red colour, while they may sometimes be found of a pure white—a charming

variety, though the normal state is quite as attractive, and it is only, perhaps, the comparative rarity of the change of tint to white that attracts us to it. Comparisons, we are told, are odious, and we may justly bear that in mind, for certainly neither tint needs the depreciation of the other to enhance its beauty. We remember some little time ago finding a plant of the white variety and gathering a few of its heads of flowers. A botanical friend who saw them was anxious to look at the plant itself, a matter that appeared to present no special difficulty; so we sallied forth and wandered for a long afternoon in every direction over the open moorland, but never found it —the proverbial difficulty of finding a needle in a bundle of hay being about a parallel case. Our failure need never have found record in these pages did it not illustrate at least the comparative rarity of the white variety, for we must have wandered miles altogether amongst the heath clumps without finding an example.

The cross-leaved heath bears transplantation better than some of the others, and will thrive well enough in the garden if taken up either in the spring or after flowering, but as large a portion of soil as possible must be moved with it. It will be noticed that we say that it bears transplantation better, not transplantation well; the matter is, after all, comparative, and although we have tried more than once, we have never been able to get either the purple heath or the ling to do well in our garden. The things do not actually die at once, but decadence sets in, and they seem, like sentient beings, to pine for the free air of the moorland. It is of course always necessary to bear in mind, if we would endeavour to grow wild flowers, that we must as nearly as possible assimilate the conditions of growth; this

seems evident enough when stated in so many words, but we have before now found that it has not occurred to everybody. People sometimes think that if a certain plant does well under the hard conditions of its natural growth, springing from a barren soil on the dusty road-side, amidst the chinks of an old wall, or swept on the moorland by all the drenching rain and the strong gusts and breezes that gather their force on the bare expanse, that of necessity it will do still better if removed to their snugly walled-in garden, and planted in a far richer soil. Experience, however, to say nothing of common sense, does not confirm their view. In our remarks on the ling, we refer to the fact that much of the ground on which heath grows so freely, and which seems so utterly waste, is really well adapted to the purposes of the woodman.

The cross-leaved heath is ordinarily a smaller plant than either of the other two common species, and is often rather overshadowed by them. The stalks are shrubby, and from nine inches to a foot high. As the plant develops, the lower leaves fall away a good deal, but the points to which they were attached remain easily visible, and give a roughened character to the stem. The leaves grow in fours on the stem, a fact that is duly illustrated in its title, the cross-leaved heath. The upper leaves are often gathered up so as nearly to touch the stem, while the lower ones stand sharply out at right angles from it. Each leaf has a fringing of soft, stiff hairs; these give a marked character to the foliage, though they vary in degrees of development, and are sometimes, though rarely, entirely absent. The flowers are ordinarily somewhat larger than those of the fine-leaved heath, and are always clustered together at the tops of the branches; all the flowers in one cluster turn in the same direction.

"There is in this countrie two kinds of heathe, one of which beareth his floures alongst the stemmes and is called long heathe; the other bearing his floures in tutteys, or tuftes, at the toppes of the branches, the whiche is called smal heath." Both Ray and Parkinson call the plant the low Dutch heath; why this should be we cannot at all explain, as there have never been any doubts thrown on the claim of the cross-leaved heath to be considered an indigenous British plant. They also call it the broom, or besom heath, a name very applicable to its sister species, but not so appropriate to the present plant. We might at first imagine that some error as to the particular kind had crept in, but Parkinson's description of "the small greene leaves somewhat having foure together," and of the flowers "five or sixe together at the toppes of the branches, of a pale purplish coloure," leaves us in no doubt that the species referred to is identical with the one we here figure. The cross-leaved heath is the badge of clan Macdonald, as the ling is of the Macdonnells. The third common species, the fine-leaved heath, the gayest and most attractive of them all, is the badge of the MacAlisters.

BLACKTHORN.

BLACKTHORN.

Prunus communis. Nat. Ord., Rosaceæ.

FEW of our hedgerow shrubs are more noticeable than the blackthorn, or more different in appearance at different times of the year. The holly bursts into a crimson glow during autumn's declining days, and stands out in its evergreen brilliancy of foliage amongst the leafless shrubs that surround it, but its flowers are small and inconspicuous, and not one in a hundred who have noticed the crimson clusters of berries could describe the blossoms that precede them. The hawthorn, with its masses of fragrant and snow-white blossoms, is as beautiful a plant as the blackthorn in the spring, but its crimson berries will not compare with the rich purple bloom of the sloes. Comparisons, however, are proverbially odious; and as we recall the sunny masses of guelder-rose blossom and its rich crimson bunches of luscious-looking berries, or the coral-like and quaintly-formed fruit of the spindle-tree, or the sombre

berries, again, of the elder or privet, we forbear, in the presence of so much beauty, in our attempt—*aut Cæsar, aut nullus*—to give the blackthorn the priority. Suffice it, then, to say that the blackthorn, whether seen in the early spring, when it is one mass of pure white blossom, or in the autumn, when its branches are laden with its clusters of purple fruit, is a beautiful object, and one that cannot fail to be very familiar to all dwellers in the country.

The flowers of the blackthorn appear before the leaves, so that we see nothing but the countless blossoms, and as these appear early in the year, and in great profusion, the tree is a very noticeable feature in the hedgerow; the fall of the petals rivals the falling snow that is not uncommonly contemporaneous. It will often be noticed that we get a spell of sharp weather and cutting winds as the blackthorn is flowering, and this period is in many parts of the country known as blackthorn winter. We have in autumn seen the ground beneath the bushes quite purpled over from the fallen fruit, the

> "Sloes austere,
> Hard fare, but such as boyish appetite disdains not."

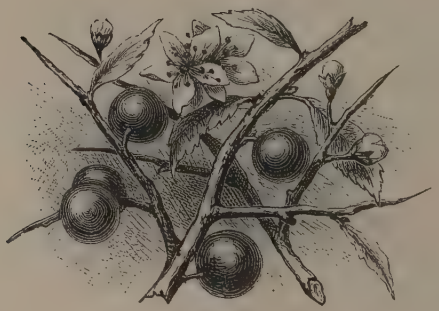
As boys are practically omnivorous, the fact of their eating the fruit must not be considered a proof of its esculent value. As a matter of fact the berries are excessively austere and astringent, and few persons who have cut their wisdom teeth will be found willing to enter on a second experiment of their quality. Cottagers sometimes gather them and make a kind of preserve of them, but it cannot be a very economical preparation, as the amount of sugar required must be enormous; and they also make a kind of wine of them—winter-pick wine, as it is ordinarily called. It is

also whispered that the berries are used in a mixture of various ingredients that is at present supplied to wine-drinkers as choice old port, while the leaves have been largely used as an adulterant of tea. Teetotaller and toper alike unconsciously share in the gifts of this beneficent shrub, that supplies to thirsty souls the product of Oporto and the cup of choice Bohea, though detractors have not been wanting who have called either decoction sloe-poison. The unripe fruit is sometimes pickled in salt and vinegar, but this we have never ventured on; the bare suggestion is amply sufficient. Some of our readers will recall the lines in Bloomfield where he speaks of the bird-boy gathering the clustering sloes and roasting them over the fire, and it is only fair to say that when the fruit has been mellowed by frost it becomes much more palatable.

The accepted botanical name of the plant is now *P. communis,* but in the earlier books the Linnean name is given, *P. spinosa.* The generic name is the Latin word for a plum-tree. *Communis* needs no explanation, while *spinosa* is the Latin adjective for prickly, and refers to the sharp thorns with which the branches are armed. A variety called the bullace may sometimes be met with, and the garden kinds of plum probably spring from the blackthorn, though these have been so long in cultivation that it is impossible to speak quite positively. Gerarde, in the reign of Elizabeth, refers to sixty sorts of plums growing in his garden in Holborn, and other references to them in our literature show them to have been freely cultivated. The Shakespearian line, "I will dance and eat plums at your wedding," at once occurs to our minds, but even in Chaucer's time it was a familiar tree, for he writes:—

"And many homely trees there were
That peaches, coines, and apples bere,
Medlers, plummes, peers, chesteinis,
Cherise, of whiche many one faine is."

Culpepper begins his description of "plumbs" with such gratuitous wantonness of discourtesy that we merely quote his opening remark, and then hand him over to the reprobation of our readers. He states that "all plumbs are under Venus, and are, like women, some better and some worse." The English translation of Dodoens says of "plummes" that "some apparteyne to the garden, and some are of a wilde kinde. The garden or tame plummes are of divers kindes, some white, some yellow, some blacke, some of the colour of a chesnut, and some of a lyght or cleare redde, and some great and some smal, some sweet and dry, some freshe and sharpe, whereof each kinde hath a particular name. The wilde plummes are the least of all, and are called Slose, Bullies, and Snagges."



HOUND'S TONGUE.

HOUND'S TONGUE.

Cynoglossum officinale. Nat. Ord., Boraginaceæ.

WHY this plant especially should be called the hound's tongue is not immediately clear, though we are told by old authorities that it derives its name from the shape of its leaves. These, possibly, are about as similar or dissimilar to the tongue of a dog as the foliage of some half-dozen other plants that at once occur to one's mind. It is, however, altogether too late in the day to raise objections on that score, for the plant is the hound's tongue not only in England, but in the vernacular of all Europe. In France, for example, it is the *Langue de chien*, in Germany the *Hundszunge*. The generic name, *Cynoglossum*, Greek in its origin, carries the same significance. One old author, Coles, in his "art of simpling," breaks away, we see, from the general theory that the plant derives its curious title from the shape and texture of the leaf, and

appeals to a still older, and perhaps equally reliable, authority, for he tells us that the plant "will tye the tongues of houndes so that they shall not bark at you, if it be laid under the bottom of your feet, as Miraldus writeth." The size and soft texture of the leaf were probably the cause of the name, in the same way that we find another plant with long and rough leaves called the ox-tongue. Pliny, in his writings, refers to a plant called cynoglossos, but it is not certainly known what plant he meant.

The whole plant has a very strong and disagreeable smell, resembling as nearly as possible that of mice; and we can only wonder that a resemblance so patent should not have influenced its name. Cattle in general dislike this nauseous herb, but goats will sometimes crop its foliage. As goats, however, will eat with impunity either tobacco-leaves or those of the deadly nightshade, their eccentric taste may well stand alone.

The hound's tongue seems to be rarely attacked by insects or caterpillars, though the larva of the scarlet tiger-moth, the *Hypercompa dominula* of the entomologist, may sometimes be found upon it. The caterpillar is black, with a broad pale yellow stripe along the back, and the moth into which it ultimately develops is one of our gayest and most beautiful insects, the front wings being dark green, spotted with yellow and white, while the hind wings are a deep crimson, spotted with black.

The specific name of the hound's tongue refers to the officinal value of the plant, but though formerly included in the Materia Medica of the London and Edinburgh Pharmacopœias, and still used in some parts of

the Continent, its medicinal use in England is now a thing of the past. Its medicinal effects seem of too doubtful a nature to make it of any real service, for while some authors ascribe to it valuable narcotic and astringent properties, others deny that it has any healing influence at all. Its lurid appearance, offensive smell, and the aversion with which animals regard it, are points that have justifiably caused it to be regarded with suspicion. Even the handling of the plant for any considerable time will in some persons produce nausea, giddiness, and fainting. It would seem almost impossible for anybody, however stupid, to mistake this plant for anything culinary, but more than one case is recorded in medical works where the plant has been eaten in error, and with the gravest results. The root of the hound's tongue is tapering, and some eight or nine inches long, and dark reddish-black externally, but whitish within. The stems are thick, erect, some two feet high or so, branching freely near their summits, and clothed with rough hairs.

"The roote of Dogstoong," the writer of a treatise published A.D. 1586 tells us, "is very good to heal wounds, and it is with good successe laid to the disease called the wild-fire, when it is pund with barley meale. The water or wine wherein it hath bene boyled cureth woundes and hote inflammations, and it is excellent against the boils and griefuances of the mouth. For the same purpose they make an ointment, as followeth:—First they boyle the iuice thereof with honey of roses, then when it is well boyled they mingle turpentine with it, sturring it hard, untill all be well incorporate together, then they apply it to wounds."

The leaves are numerous, alternate, long, and narrow,

and their margins are a good deal waved. In colour they are of a greyish-green, and the numerous short hairs upon them not only cause them to look greyer, but give them a soft feel to the touch. The lower leaves are on long stalks, and are considerably broader in proportion to their length than the smaller stemless leaves that clasp the stalks. The flowers are small and of a dull reddish-crimson, arranged in racemes. The arrangement is unilateral: that is to say, all the flowers spring from one side of the stem. The flower racemes are terminal, or issue from the axils of the upper leaves, and ordinarily are slightly drooping. The fruit is of a somewhat curious character, being divided into four portions and very rough to the touch; our illustration gives a sufficiently good idea of its character. "The seed is flat and rough, three or foure togither like to a true-loue knot, the which do cleave fast unto garments, when they are ripe." The hound's tongue is a biennial, and should be looked for in woods and on waste ground during June and July.

CARROT.

CARROT.

Daucus Carota. Nat. Ord., Umbelliferæ.

ANY one who is at all familiar with the look of the garden carrot will have no difficulty in recognising its wild progenitor, for though cultivation has done much to improve the plant, its main features, the richly-cut leaves and densely-clustered blossoms, remain unaltered. When we pull the plant up, we "make assurance doubly sure," for the well-known odour of the root settles the point beyond all further doubt. The wild carrot is very generally distributed throughout Britain, on the borders of fields and by the road-sides, and seems to thrive more especially near the sea. It may be found in flower throughout the whole of the summer. The root is spindle-shaped, slender, firm, somewhat tough and woody, yellowish in colour, penetrating some distance into the ground, and having only a few lateral rootlets. The leaves are very finely

divided, and of the form termed botanically tri-pinnate. When a leaf is composed, as in the case of the ash or the parsnip, of a number of lateral leaflets, it is said to be pinnate or feather-like; when these lateral divisions are themselves pinnated, it is said to be bi-pinnate, or twice-feathered. The leaf in our illustration is of this character, but some of the lower leaves are still more divided, and become tri-pinnate. The lower leaves are considerably larger than the upper; their arrangement on the main stem is alternate, and all embrace it with that sheathing base which is so characteristic of the umbelliferous plants.

The stems are erect and branched, furrowed, attaining ordinarily to a height of some two feet, but sometimes exceeding this; both stems and leaves are more or less clothed with short coarse hairs. The umbels of the flowers are terminal, large, and composed of numerous rays. The flowers themselves are very small, but from their whiteness and number, present in the aggregate a very conspicuous appearance. During the flowering-period the head is nearly flat or slightly convex, but as the seeds ripen the form becomes very cup-like; hence one of the popular names for the plant is bird's-nest, while in Germany it is the *Vogelnest*. The two contrasting forms, the umbel during the flowering and during the fruiting stage, may be clearly seen in our illustration. The ring of finely-divided and leaf-like bracts at the point whence the umbel springs is another noticeable feature. The fruit is covered with numerous little bristles, arranged in five rows.

If any of our readers will rescue just the head of a carrot, before the cook consigns it to the rubbish-heap, and then place it in a small saucer of water, in a short time it will throw up a very graceful and delicate

tuft of leaves. We have seen very pretty winter ornaments made by suspending these carrot-heads in damp moss; all that is necessary is to slice the top off the carrot, say half an inch deep, and then keep it moist. Our plant is in France the *carotte*, and in Italy the *corota*. The derivation of the word is obscure, but it has been suggested that it owes its origin to the Celtic word *car*, signifying red. The only drawback that one feels in accepting this etymology is a doubt as to whether the Celtic peoples cultivated the carrot at all. It is only the cultivated root that is red, the wild one being yellow in colour; if, therefore, they only knew it in its wild state, they would naturally have called it by some name signifying yellow-rooted.

The generic name *Daucus* is handed down to us from the old Greek writers; there seems to be no reasonable doubt that the plant so called by Dioscorides and other old authorities is the carrot. Pliny speaks of the finest carrots being procurable in his day from Candia, and we from time to time meet with other references that seem to identify the ancient plant with the root so well known to ourselves. The carrot was in ancient times much valued for its medicinal properties, and the old Greek name refers to its stimulating character. Carrots contain a large amount of sugar. From one pound of carrots we are able to obtain one ounce and eleven grains of sugar, while out of the sixteen ounces fourteen are water. In the interesting catalogue of the Food Collection at Bethnal Green Museum, prepared by Dr. Lankester, we learn that the maximum amount of work producible by a pound of carrots is that it will enable a man to raise sixty-four tons one foot high, so that it would appear to be a very efficient force-producer. The amount of water will probably surprise many people;

but when we consider that in an average specimen of humanity, a man of eleven stone or one hundred and fifty-four pounds weight, about one hundred and eleven of these are water, we see that a goodly supply to repair waste and wear and tear is necessary. Physiologically, a man may be considered as being about twenty pounds of carbon, a little phosphorus, small quantities of iron, sodium, and other substances, and several pailfuls of water.

Carrots are also extremely useful for cattle-feeding, and one cannot give one's horse or cow a greater treat than a few of these sweet and succulent roots. The compressed roots make an admirable food towards the dietary of voyagers; they can be reduced to powder, and thus become very portable. In France and Germany a spirit is distilled from the carrot, one gallon being yielded by about one hundred and fifty pounds of roots; attempts have also been made to extract sugar from them, but in competition with either cane-sugar or that obtainable from the beet-root, it has not proved commercially successful. A less legitimate use of the carrot is as an adulterant of coffee.

CORN-MINT.

THE CORN-MINT.

Mentha arvensis. Nat. Ord., Labiatæ.

OUR readers will have little difficulty in finding the plant here figured, as it is abundantly distributed throughout Britain, though, like many plants, it is less commonly met with as we travel northward. It should be looked for in fields and moist ground. Its flowering season is August and September. Like all the other native species of mint, it varies very considerably in appearance in different plants, some being much larger than others, with a more developed foliage, and a much greater hairiness of all the parts. All the species have a strong odour, that becomes more decided still when the leaves are bruised in any way. The corn-

mint is a perennial, and in this, as in all the mints, the root-stock creeps freely, so that when the plant has once taken hold of the ground it becomes very difficult to eradicate it. From the low spreading branches that lie near the ground, the flowering stems are each year thrown up. The leaves are borne on stalks, and have their outlines freely toothed. Like the other labiates, the stems are seen to be four-angled when cut across, and the leaves spring from them in pairs. This quadrangular section and opposite growth of the foliage may be very well seen in the white dead-nettle, the ground-ivy, and the self-heal, or the stachys, all plants that figure in our series. The upper leaves in the corn-mint are smaller than the lower, and the flowers are arranged in rings in their axils. The flowers themselves are small individually, but the delicacy of their colour and the dense clusters in which they grow give them collectively an importance the units may lack, and ring after ring of these blossoms form as a whole a conspicuous and welcome addition to the flora of the fields and meadows, and one that has not escaped the attention of our poets. Peele, one of the older writers, a poet of the middle of the sixteenth century, has the following lines :—

> "Under the hawthorn and the poplar tree,
> The humble florets all delight to be;
> The primrose and the purple hyacinth,
> The dainty violet and the wholesome minthe."

The mint is by many of the older herbalists spelt "minthe," or we should feel that the recognised licence of the poet had been rather exceeded when mint by a perversion of spelling was made to rhyme with hyacinth. In Brown's "Pastorals" we are invited to wander "into the meadows

where mint perfumes the gentle air." The garden mint is referred to by Clare :—

> "And where the marjoram once, and sage and rue,
> And balm and mint, with curled-leaf parsley grew,
> And double marigolds and silver thyme,
> And pumpkins 'neath the window used to climb."

There is, we fear, little doubt but that practical agriculturists consider the corn-mint a nuisance, as its long creeping roots bind the soil together, and ultimately overrun a considerable area. It is generally an indication that the drainage of the land has been neglected.

Gerarde says, "The smell of mint doth stir up the minde and the taste to a greedy desire of meate;" and hence, we may perhaps conclude, the wisdom of the custom handed down to us from our ancestors of having mint-sauce with our lamb, though such an addition we prefer to consider rather in the nature of a relish than as a deliberate stimulus to greedy desire. Even in Roman times the mint entered into matters culinary. Another use of it, we are told, is to frighten mice from the dwelling. It is said, with what truth we know not, that these little depredators are so averse to the odour of mint that they rather vacate the premises than endure it. The name *Mentha* was originally applied to the mint by Theophrastus. Menthe, we learn from Ovid, was a nymph who was metamorphosed by Proserpine into the herb we now call mint. The specific title refers to the locality where the plant is found. In Wales it is the *Mintys ar-dir.*

The various species of mint have much in common, and have all been held in high medical repute. Westmacott, a doctor of medicine, who wrote a little book on plants in the year 1694, mentions the various sorts, and states that they

are very well known to "the young Botanists and Herb Women belonging to Apothecarys' Shops." We may mention, by the way, that Westmacott is very fond of capital letters, a fact that will duly appear as we proceed with our quotation. "Mints have a biting, aromatick, bitterish Sapor, with a strong fragrant Smell, abounding with a pungent Volatile Salt, and a Subtil Sulphur which destroyeth Acids. And herein doth lodge the Causation of such Medicinal Virtues in this Herb and others of the like Nature. In the Shops are—1. The dry Herbs. 2ndly. Mint Water. 3rdly. Spirit of Mints. 4th. Syrup of Mints. 5th. The Conserve of the Leaves. 6th. The Simple Oyl. 7th. The Chimical Oyl." Dodonæus says that "the sauour of sent of Mynte reioyceth man, wherefore they sow and strow the wild Mynte in this countrie in places whereas feastes are kept, and in Churches. The iuyce of Mynte mingled with honied water cureth the payne of the eares when dropped therein, and taketh away the asperitie and roughness of the tongue when it is rubbed or washed therewith."

FIELD SCORPION-GRASS.

FIELD SCORPION-GRASS.

Myosotis arvensis. Nat. Ord., Boraginaceæ.

ANY one who is familiar with the beautiful forget-me-not of our streams will have little difficulty in detecting a family likeness between it and our present plant; both are members of the same genus, *Myosotis*, though the former is undoubtedly the more attractive of the two. We have in Britain some six or seven species of scorpion-grass—some of them of considerable rarity, and others widely distributed and commonly to be met with—and of these the field scorpion-grass, the subject of our present illustration, is the most abundant of all. It will be found on hedge-banks, the edges of woods and copses, and perhaps more especially on cultivated ground, its bunches of greyish green leaves soon making their appearance on any part of the garden or field that has escaped the hoe, and its flowers being displayed during June, July, and August.

The stem is weak, often somewhat straggling, and a foot or so in length, both stems and leaves being a good deal clothed with soft hairs. The calyx is acutely five-cleft, and shorter than the pedicel bearing it. The flowers, when we compare them with those of the forget-me-not, are small and insignificant-looking, though they are of too bright and pure a blue to altogether escape our notice. The corolla is widely displayed and all in one piece, but cut up into five broad, rounded lobes. The flowers are borne on long leafless racemes. These flowering stems often fork off into pairs, and at their terminations roll round like the tail of a scorpion, a peculiarity that we may see in the comfrey and some few other flowers, and which has procured for our plant its most common popular name. It is sometimes also called the field forget-me-not.

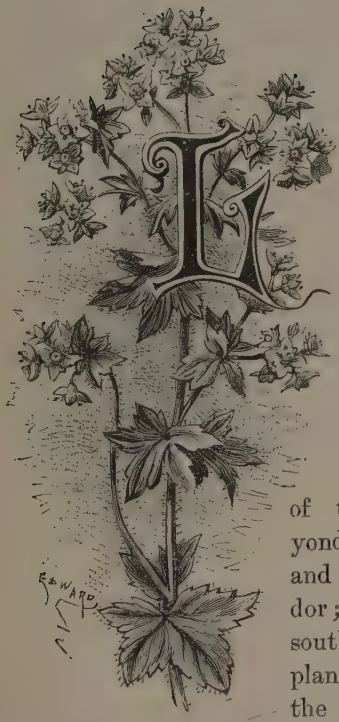
The name *Myosotis* signifies mouse-ear, a name bestowed on the genus from the shape and hairiness of the leaves, and originally applied by the old Greek writer Dioscorides. The slight resemblance of the curled-up buds to the tail of a scorpion was naturally held as an indication that the plant possessed potent powers against the evil powers of the scorpion and against snakes and other such like venomous creatures. We have already referred to the extraordinary dread that scorpions seem to have inspired in mediæval times, though England can never have had any practical experience of them in the living state, or even when dead. Possibly the fear of them was a tradition handed down from the days of the Crusades. Gerarde we see gives six herbal remedies against the stinging of bees and wasps, and one against the stinging of nettles, while against the far more remote danger of the sting of the scorpion, his readers are fore-armed with

seventeen distinct remedies. These plants were sometimes called scorpoides by the older writers, but at other times this name was limited to one or two foreign plants with very twisted seeds, and our English plants were grouped with them in the old herbals, yet separated by the title of false bastard scorpoides. After describing these foreign plants, Dodonæus, for example, goes on to speak of the forget-me-not and the present plant, making the one masculine and the other feminine. "There is yet two other small herbs which some do also name scorpion-grass or scorpion-wort, although they be not the right. The one of them is called male scorpion, and the other female scorpion. The male bastard scorpoides groweth about the length of a man's hand, or to the length of a foote, his stalks are crookedly turning aboue at the top, whereon the knops, buds, and floures do stand, euen like to a scorpion's taile; the leaues be long, narrow, and small. The floures be faire and pleasant, being of fine little leaues set one by another, of azure colour with a little yellow in the middle. The female bastard scorpoides is very much like to the male, sauing that his stalks and leaves be rough and hairie and his floueres smaller. The tops of the stalkes be likewise crooked, euen as the tops of the male. The male bastard scorpoides groweth in medowes, alongst by running streames and water courses; and the neerer it groweth to the water the greater it is and the higher, so that the leaues do sometimes grow to the quantitie of willow leaues. The female bastard scorpoides groweth in the borders of fields and gardens. The bastard scorpoides haue none other knowen name, but some do count them to be scorpion herbs."

Besides the forget-me-not, a plant described in a

later volume, and the present species, we have the wood scorpion-grass, the early field scorpion-grass, and the changeable scorpion-grass. The first of these, the *M. sylvatica*, is found in woods and shady places on the mountains. It is not under any circumstances a common plant, but appears to be more especially met with in Scotland and the north of England, though such southern localities as Essex and Kent are mentioned in the Floras Its flowers are bright blue, and very large and handsome looking. The early field scorpion-grass, or *M. collina*, is a small annual that may sometimes be found in dry open expanses, on the tops of walls, and other dry places. Its small but brilliantly blue flowers expand in April and May. The changeable scorpion-grass, or *M. versicolor*, may be very commonly found on banks, in meadows, by roadsides, and in fact almost anywhere: it derives its name from the fact that its corollas are at first pale yellow, and gradually change to blue, until they become a quite deep cerulean tint prior to their decay. The plants should be looked for in April, May, and June. *Sylvatica* signifies that which pertains to the sylvan shades; *collina* refers to the dry hillside; while *versicolor* alludes to the varied and changing tints seen in the blossoms of the species so-called.

LADY'S MANTLE.



LADY'S MANTLE.

Alchemilla vulgaris. Nat. Ord., Rosaceæ.

LADY'S MANTLE, the subject of our present illustration, is generally distributed over Britain, but seems more especially at home in the colder regions and on high-lying land. It may also be found in moist pasturage. Wherever we find it, it would appear to select the more bracing climates, being either in an especial degree a plant of the North, freely found beyond the Arctic circle in Europe and Asia, in Greenland and Labrador; or if found in more distinctly southern latitudes, it is only as a plant of such mountain ranges as the Himalayas. It is a perennial, and should be looked for in flower during June, July, and August. From the fact of the whole plant, stems, leaves, and flowers, being clad in green, it must very frequently escape notice, yet we would claim for it our readers' hearty appreciation; the grace of its growth, the rich form of its foliage, and the

beautiful shape of its clustering blossoms are all features which justify us in our own appreciation and in appealing to that of others who may not yet have made an acquaintance with its modest beauties.

The lower leaves of the Lady's mantle are much larger than any of those which our limited space has allowed us to show, being borne on long stalks, fairly circular in general outline, but having their margins cut into seven or nine broad but shallow lobes; the upper leaves are small, and either stalkless or on short stems, and all are acutely notched and toothed. The leaf-like stipules embracing the stem are a noticeable feature. The flowers are small, numerous, and yellowish-green in colour, grouped in clusters at the ends of the freely branching flower-stems. The petals are wanting, the calyx eight-cleft, the four outer and alternating segments being smaller than the others. The stamens are four in number. The whole plant is about a foot in height, and generally more or less clothed with soft hairs.

The plant is the Lady's mantle, not the ladies'-mantle; the point may not appear important, and we find it sometimes given one way and sometimes another; but the first is the true form, and bears record of its association in mediæval times with the Virgin Mary. Other parallel examples are the thrift or Lady's cushion, the dodder or Lady's laces, the Solomon's seal or Lady's seal, the quaking grass or Lady's hair, and several others that we need not stay to particularise. It is in Sweden, too, the Lady's cape, in Germany the Frauenmantel. In France an entirely new idea is introduced, the form of the spreading root-leaves having suggested the name pied-de-lion. It was also called in mediæval Latin the

leontopodium, Anglicised into lion's-paw, and thence modified into bear's-foot. The radiating character of the lower leaves, suggested to others the idea of a star, and procured it the name of stellaria; but this was an unfortunate name, as it had already been bestowed on some three or four other plants.

Tragus seems to have been the original bestower of the generic name on the Lady's mantle, a name that was confirmed by its re-adoption by Linnæus. As probably Tragus is but an empty name to the great majority of our readers, we may perhaps indulge in a brief biographical parenthesis. The so-called Tragus was a German botanist, his real name being Jerome Boch. In accordance with a fashion prevalent amongst the learned in the middle ages, his name, equivalent in English to goat, was Latinised into Tragus, a word of the same signification. Tragus is best known by his History of Plants, published in German in the year 1532, and in a Latin edition in 1552.

The generic title, of the plant, *Alchemilla*, like our English word alchemy, is derived from the Arabic word alkemelych, and was bestowed owing to the wonder-working powers of the plant according to some old writers, though others thought and taught, or at least taught, that the alchemical virtues lay in the subtle influence the foliage imparted to the dewdrops that lay in its furrowed leaves. These dewdrops entered into many a mystic potion.

Horses and sheep are fond of the Lady's mantle, and it has therefore been suggested that it might be profitably used as a fodder-plant; but there is, of course, a wide distinction between observing animals browsing upon a plant on the mountain-sides, and deliberately setting

some few acres of ground with it for forage, and so far as we are able to trace the matter, the scheme seems never to have gone beyond the theoretical stage. It is of course comparatively easy for a botanist to make such a suggestion, but with the farmer who is asked to forego wheat or turnips for a crop of Lady's mantle the matter assumes an entirely different aspect.

The parsley-piert or *Alchemilla arvensis* is an allied species abundantly to be met with growing on the tops of old walls, on waste ground, in gravel-pits, and the like. As this plant is rarely more than four inches high, and has very minute green flowers, it is at best inconspicuous, though its deeply-divided leaves and general growth are by no means unattractive to the lover of natural beauty.

GROUNDSEL.

GROUNDSEL.

Senecio vulgaris. Nat. Ord., Compositæ.

AMONGST all familiar wild flowers, perhaps none is more distinctly familiar than the lowly groundsel, the subject of our present illustration. Even the dweller in the town can scarcely be ignorant of it, for, together with the chickweed and the plantain, its sale is one of the recognised street industries amongst the busy haunts of men. It is a very popular food not only with caged birds but with many of our common wild species. Its powers of seeding are something enormous, as any one who has a garden knows to his cost. The plant is an annual, and is pulled up with the greatest ease, as its small fibrous roots have very little hold of the soil. It would appear then that there need be but little difficulty in effecting its final and complete eradication; but the plant seeds so freely, and scatters its multitudinous

seeds so widely with every wind that blows, that its young seedlings call for continuous attention on the part of the gardener. The plant, too, quickly arrives at maturity, so that while the gardener is congratulating himself that his late heavy efforts for its overthrow have given him a little interval of rest, a new generation is rapidly developing and will, while he is yet in a state of thankful ease, be sending its winged seeds broadcast, and covering the ground with its mantle of unwelcome verdure. The problem is further intensified by the fact that there is no single month in the year that the groundsel may not be found flowering and seeding. As the seeds fly far and wide, one careless gardener, or one small and unoccupied piece of land, can give employment to a whole district.

Our ancestors seem to have fully realised the insatiable requirements of the plant; our name groundsel is a literal descendant, through the mediæval word groundeswyle, from the Anglo-Saxon groundswelge, a word signifying earth-glutton, or ground-devourer, and the plant is still in Scotland and the north of England called the grundy-swallow. Other old or provincial names are simson and sention, while in France it is the seneçon. All these latter names are derived from the same idea that we find in the generic botanical name senecio, a word derived from the Latin *senex*, an old man, "because," as an old herbal hath it, "the flower of this herbe hath white hair, and when the winde bloweth it away, then it appeareth like a bald-headed man." This allusion is, of course, to the globular head of white downy hair that succeeds the flowers. Another and distinct genus of plants, *Erigeron*, conveys the same idea in its title, the name being

compounded of two Greek words signifying early and old man.

The stalk of the groundsel is single, frequently freely branching near its summit, about a foot in height, often purple in colour, and sometimes slightly downy. The leaves are of a dull deep green colour, very sharply divided into numerous lateral portions, and embracing the stems at their bases. The structure of the flower-head is of the well-known type we have already seen in numerous examples of the great natural order to which the plant belongs. In Ray's time we learn that the groundsel was used in veterinary practice, and our ancestors used it, like everything else, in their medical recipes, both inwardly as a decoction or tea and outwardly as a poultice. There is still, we believe, considerable faith in its efficacy in rural circles. Possibly this belief may be held with justice, though on this point we confess that we have no knowledge to go on, but only a general feeling in our mind that perhaps we at times too hastily undervalue the medicinal value of the herbage around us, while we ransack the world over for out-of-the-way remedies.

Though the old herbalists, in the robustness of their faith in themselves and their remedies, could believe a good deal, and sing the praises of groundsel for the relief of "choller," jaundice, sciatica, "sadnesse of the heart," and much else, even they found it necessary to draw the line somewhere. One of them tells us that "Pliny reporteth a ridiculous fable to helpe the toothache, to digge up the plant without any iron toole, and then to touch the aking tooth five times therewith, and to spit three times after every such touch, and afterwards to set the herbe againe in the same place, so that it may grow, and this will ease

the paines. Another as fabulous and ridiculous as that, is this, which some have set downe, that glasse being boyled in the juice of groundsel and the blood of a ramme or goate, will become as soft as wax, fit to be made into any forme, which being put into cold water will come to be harde againe." Could we only believe in the possibility of such a recipe, a fine career of usefulness would be open to both "goates" and groundsel; in the meantime it is a welcome food to small birds, and a source of endless vexation to the generality of mankind.

HENBIT.

THE HENBIT.

Lamium amplexicaule. Nat. Ord., Labiatæ.

WE find in Britain some three or four species of *Lamium*. It is necessary to put matters in this somewhat vague way, for some botanists recognise as species what others are content to deem mere varieties. Thus one botanist, after describing our species, adds, "very difficult to be distinguished by characters either from the last or the next species, and perhaps the three might be judiciously combined." Those, however, of which there can be no doubt are the *L. album* or white dead-nettle, the *L. purpureum* or red dead-nettle, and the present species. To these may be added the yellow dead-nettle or weasel-snout, classed by some botanists in a genus of its own, *Galeobdolon*, on account of certain modifications of structure, but retained by others in the same genus with the rest we have named. All these, with the exception of the Henbit, are often popularly called archangels, and our series includes illustrations of all four of them. While

the other three species are more especially plants of the spring the Henbit may be found in flower throughout the whole season. We find in our rough floral notes, made from time to time, the following entry respecting our present plant:—"Found well in flower on Oct. 15th, in a field of swedes, together with the charlock and Shepherd's-needle, the three all well out, and abundant all over the field."

Our remarks as to the spring character of the red and white dead-nettles must be taken with a certain limitation; as a matter of fact, there is perhaps scarcely a month in the year when examples of each could not be met with, but it is in an especial degree in the spring that we find the hedge-banks whitened over or suffused with a dull purple glow from the abundance of their flowers. The Henbit, though a common-enough plant, is never so abundant, never found in such aggregated masses, as the others; nor does it seem to have so distinctly a time when it is at its best, but at any time from April to October it may be ordinarily met with on waste land, amidst field-crops, and in gardens. It is an annual.

The Henbit attains to a height of from nine inches to a foot, nearly upright in general direction, yet branching freely. These branches are thrown out in pairs, and spring from near the ground; they are square in section, as in the other dead-nettles. All the leaves spring in pairs from the stems, the lower ones being on stems and of a rounded heart-shaped figure, and deeply cut in outline; the upper leaves are of very similar character, but stalkless, and closely surrounding the stem—a fact that is brought out in the specific name *amplexicaule*, a Latin word derived from two others and signifying stem-embracing. The flowers

grow in rings at the tops of the stalks, and are of very various sizes, some being but little larger than the calyx from which they spring, while others are three or four times its length, of a bright rosy-red, and more slender and delicate than those of the red dead-nettle. We notice that one old writer speaks of them as "small-hooded gaping blew flowers," but we have already had frequent occasion to notice in the old herbals that, though their authors could often most pithily describe the leading features of the growth of a plant in a very few words, they are often by no means to be relied on when it becomes a question of tint.

The name Henbit, according to Prior in his altogether admirable book, "The Popular Names of British Plants," was bestowed on it from some fancied nibbling of its leaves by poultry, and we find the same idea conveyed in the name bestowed on it by the Germans, Flemings, and others, and in the Old-Latin name for the plant, *Morsus-gallinæ*. The generic name *Lamium* is derived from the Greek word for throat, and refers to the long tubular corollas of this and the allied plants; by some of the earlier botanists it was called Alsine. We find it under this name, for instance, in the herbals of Gerarde and Parkinson. The word signifies growing in groves, and has been bestowed upon several very different plants, though perhaps on none less appropriately than on the Henbit. These early writers, too, associated the plant, for some extraordinary reason, with the chickweed, though there may possibly be some association or line of ideas now lost to us that in some way unites the plant bitten of hens and the weed of the chicks. However this may be, the plant in old herbals rejoices in the far-stretching title of the great ground-ivy-leaved chickweed. The shape of the leaves and their growth

in pairs is distinctly suggestive of the ground ivy, a plant we shall figure in our series, but which is in no way related to the true ivy (*Hedera Helix*). Nevertheless, from the resemblance of the Henbit to the one plant, it has somehow received a name derived from the other, and is by some old writers called the hederula.

In the same way the ivy-leaved speedwell, the Veronica hederifolia of the botanist, was by some of the old writers called the lesser Henbit, thus making confusion worse confounded. The real Henbit was called the hederula, a name derived from the true ivy, because it was something like a plant that had no connection with, or resemblance to the ivy, while another plant, one of the speedwells, that really has its foliage sufficiently like in form to the true ivy to justify the botanical name, hederifolia, is called the lesser Henbit, though it has no relationship whatever with the real Henbit, and is not even in the same great natural order. The whole difficulty arises from the earnest desire the early writers seem to have felt to find resemblances, and on the strength of these to ally together plants of the most diverse natures.

DWARF THISTLE.

THE DWARF THISTLE.

Cnicus acaulis. Nat. Ord., Compositæ.

ANY one familiar with the great expanses of chalk down-land so characteristic of the south of England will scarcely have failed to notice the dwarf thistles that dot them over so abundantly. Even if they have not perceived the crimson flower-heads nestling in the short turf, which makes a tempting resting-place, it is more than possible that their pleasant dream of rest has been rudely dispelled by the anguish created by putting one's hand on the prickly foliage, thickly spread over the ground; and there is certainly no more practical way of appreciating the force and point of the motto that accompanies the heraldic use of the thistle as the national badge of Scotland—"Nemo me impune lacessit"—no one trifles with me scathless. An old writer thus discourses on the stinging nettle:—"This vexing vegetable of subtil acrimonious parts, are listed under valiant Mars, who hath armed them with flaming

swords, to offend those that dare to lay hands on them," and we may well re-echo his words, though clothed in somewhat hyperbolic language, and apply them to this other vexing vegetable, the dwarf thistle. One's first impression on seeing these thistles thickly spreading over the far-reaching downs is that they are some ordinary species that has got dwarfed by the keen winds which sweep across these breezy expanses. We are so used to the idea of thistles some three, four, or even six feet high, that we cannot at once realise that the little rosette at our feet is a truly representative plant, and a veritable and distinct species. The specific name signifies stemless, and the plant is sometimes, in popular nomenclature, called the stalkless thistle, but a reference to our illustration will show that these names are not quite in accordance with the facts of the case. Its almost total want of stem at once renders its identification easy; it rarely attains to more than an inch in height, though we have once or twice seen it four or five inches high. As no other thistle when an inch high develops flower-heads, the present plant cannot be mistaken for the seedling state of any other species.

The root-stock of the dwarf thistle is woody and perennial, and from it springs a spreading rosette of very prickly leaves closely appressed to the turf, and having numerous and well-armed lateral segments. The darker colour and glossy surface of these leaves tends to make them somewhat conspicuous amongst the short verdant grass-blades; but in any case the plant is particularly humble-looking, and would entirely escape notice were it not for the large crimson flower which springs from the centre of the radiating leaves. These flower-heads are large even when compared with many other species

of thistle, and appear especially so when we regard the diminutive plant from which they spring. Commonly only a single flower-head springs from the centre of the leafy tuft, but in other rosettes we find two or more. Our illustration represents three, but the flower-heads are more ordinarily solitary. After the conspicuous purple flower-heads we find the scarcely less conspicuous masses of white feathery down. This down, with its attached seeds, is dissipated by the wind and sent far and wide. The abundance of this plant in dry pasturage makes it one of the plagues of the agriculturist, as it takes up the room that he would prefer to see occupied by the sweet upland turf. It is one of the later flowering species of thistle, and should be looked for in July, August, and September: it seems to be only found in the southern and central counties of England, and more especially in the former, being, in fact, as we have already indicated, in an especial degree a plant of the chalk. Hence we find it more especially on the great expanses of cliff and downland so characteristic of parts of Surrey, Sussex, Kent, and Hampshire. Where found at all the dwarf thistle is found in abundance.

The roots of the various species of thistle were boiled in wine by our ancestors as correctives of impurities and poverty of the blood. "The same layd to with vinegar healeth the wild scurffe or noughty scabbe." Pliny started the idea, an idea which the mediæval writers reverently passed on—that if a bald head were fomented with a decoction of thistle the application would bring a luxuriant covering back again. We have great pleasure in presenting this fact, or pseudo-fact, to the knowledge of our readers who may be in search of a hair-restorer: we may yet live to see glowing advertisements of the "world-

famed Cnicuaculis," as it is probably at least as effective as some other preparations, while the raw material is so abundant that the preparation of the restorer, say at seven and sixpence the bottle, affords a fine field for commercial energy and speculation.

The Scottish thistle, like the Irish shamrock, is a choice subject for learned argument, and much discussion has been raised as to which species has the honour of giving the national badge to Caledonia. Such discussion here would be wholly out of place, and even the bare recapitulation of the various views for or against the different species would be decidedly superfluous, but we may just mention that the present plant is one of those held to have a good right to claim this proud position.

STARWORT.

STARWORT.

Aster Tripolium. Nat. Ord., Compositæ.

THE present plant has several names, though of these the Sea-aster and the one we have selected above are at once the commonest and most expressive. Aster, we need scarcely pause to explain, means a star, while wort is the Saxon word for plant. It will be seen, therefore, that the same idea, a reference to the star-like rays of the flower, runs through both names, and any one who has seen its stellate blossoms enlivening in their thousands some dreary sea-side marsh will feel the full appropriateness and beauty of the titles given. Other names in more or less common use are the Michaelmas daisy, the blue daisy, and the blue chamomile. The true Michaelmas daisy is a plant of very near kindred, and we can easily see how the name of the garden flower got transferred to this dweller in the waste, nor is there any more difficulty in understanding how the

names of such well-known fellow-composite flowers as the daisy or the chamomile were shared by the sea-aster or starwort.

"Our ordinary sea-starrewort hath many long and somewhat broad leaves rising from the roote next the ground, smooth, fat, and thicke, and of a blewish-greene colour, from among which riseth up a smooth herby or fleshy-greene stalke, branched towards the toppes into divers smaller branches, with such-like leaves upon them as grow below, but lesser. The flowers that stand at the toppes of them are somewhat large, having a bluish purple border of leaves standing about a yellow middle thrum, which, after it hath done flowering, turneth into downe, and the small seede therewithe is blown away at the will of the winde; the roote hath divers greater strings and many smaller fibres thereat which grow deepe and sticke fast in the middle of the marshie ditches where it groweth." The foregoing, despite its antique phraseology, is as graphic a description of the plant as one need wish for.

The starwort, as we have already indicated, is a denizen of the low-lying lands by the sea that come beneath the saline influences and occasional overflowings of the tide—"you shall hardly misse it in any salt marsh in some place or other if you looke well for it;"—it attains to a height of about a foot under favourable conditions, and should be sought for during the later months of summer, and part of the autumn. Hence it will be seen that not only does its appearance justify the name of Michaelmas daisy but also the late date of its flowering-season.

The specific name *Tripolium* is the old Greek name for the plant. Dioscorides says that this name was given because the flowers change colour thrice a day

—an altogether wild statement that one would have imagined could not have survived the day of its birth. Gerarde discourseth as follows on the plant:—It is reported by men of great fame and learning that this plant doth change the colour of its flowers thrice in a day. This rumour we may believe, and it may be true, for that we see and perceive things of as great and greater wonder to proceed out of the earth. This herbe I planted in my garden, whither (in his season) I did repaire to finde out the truth hereof, but I could not espy any such variablenesse herein; yet thus much I may say, that as the heate of the sunne doth change the colour of diuers flowers so it fell out with this, which in the morning was very faire, but after of a pale wan colour. Which proveth that to be but a fable which is reported by some, that in one day it changeth the colour of its flowers thrice: that is to say, in the morning it is white, at noone purple, and in the evening crimson. But it is not untrue that there may be found three colours of the flowers in one day, by reason that the flowers are not all perfected together, but one after another by little and little. There may easily be obserued three colours in them, which is to be vnderstood of them that are beginning to flowre, that are perfectly flowred, and those that are falling away. For they that are flowering and be not wide open and perfect are of a purplish colour, and those that are perfect and wide-open of a whitish blew, and such as have fallen away have a white down; which changing hapneth vnto other plants." Gerarde had himself too great a love of the marvellous to be easily daunted by a wonderful story, but we cannot but respect his love for the truth, and the great pains he took to ascertain what really was the truth. So many of these ancient writers, and

too many of their modern successors, find it exceedingly easy just to pass a story on, so that a statement of any kind, if not too bare-faced, may live an unlimited time without being brought to the test. We have ourselves brought to the rough test of trial and experience very many of the statements found in various books of more or less antiquity, and have frequently found them delusive, until at last we have arrived at a state of almost utter scepticism on all such points.

The following graphic description of the littoral waste by Merritt is well worth quotation :—

> "The marsh is bleak and lonely. Scarce a flower
> Gleams in the waving grass. The rosy thrift
> Has paler grown since summer blessed the scene:
> And the sea-lavender, whose lilac blooms
> Drew from the saline soil a richer hue
> Than when they grew on yonder towering cliff,
> Quivers in flowering greenness to the wind.
> No sound is heard, save when the sea-bird screams
> Its lonely presage of the coming storm;
> And the sole blossom which can glad the eye
> Is yon pale starwort nodding to the wind."

BEE ORCHIS.

BEE ORCHIS.

Ophrys apifera. Nat. Ord., Orchidaceæ.

NATURE contains many curious examples of what has been termed mimicry; the reproduction of a certain form in some wholly different species. In most cases this mimicry is held to be a protective feature, but in others, as in the present case, this theory does not meet the requirements of the case. One can easily understand that the resemblance of the curious clear-winged moths, such as the *Sphecia apiformis*, to bees, wasps, hornets, and such-like well-armed insects, often saves them from being captured, but in the case of the resemblance of our present plant to the insect of which it bears the name this can only be regarded purely and simply as a freak of Nature. The animal and vegetable kingdoms curiously interchange their forms, and while on the one hand we have a plant having its flowers strongly

suggestive of a bee, on the other we find the wonderful leaf-insect of the tropics so similar in its marking to the colouring, veining, form, and texture of some leaves that it becomes extremely difficult to detect its presence when motionless amongst the surrounding foliage. The upper surfaces of the wings of many moths, and the under surfaces of the wings of most butterflies, those parts in fact in each that are most visible when the insect is at rest, are beautifully mottled and shaded with greys and browns resembling the tints of barks and lichens. The Lappet and Bufftip moths afford beautiful illustrations of the mimicry of foliage and dead sticks. Some caterpillars closely resemble twigs, and many of our readers will remember to have seen specimens in our museums of the eccentric stick insects of the Eastern archipelago. It would be easy to multiply to almost any extent additional examples of this curious mimicry, protective or otherwise.

The old poet Langhorne has the following lines on the subject of our illustration:—

"See on that flowret's velvet breast,
How close the busy vagrant lies!
His thin-wrought plume, his downy breast,
The ambrosial gold that swells his thighs.

Perhaps his fragrant load may bind
His limbs; we'll set the captive free;
I sought the living bee to find,
And found the picture of a bee."

The name by which the plant is commonly known is so distinctly appropriate that, with the exception of the old name of "honey-bee flowere," given in some of the old herbals, it has no alternative title, the "dead carkasse of a Bee," to quote Gerarde, being too evidently to the fore to make any name appropriate that ignored so marked a feature

The bee-orchis should be searched for on chalk-downs and clayey soils during June and July. Though not by any means a scarce plant in the special localities it favours, it is often almost extirpated in a district by the passion that some botanists and excursionists have for rooting up every specimen they can find, exceeding all bounds of moderation, and selfishly depriving those who come after them of a pleasure they might fairly claim to share. When gathered the flowers preserve their freshness for a long time, the buds continuing to expand.

The tubers of the bee-orchis are of the ordinary type of the genus, two roundish and unequal masses surmounted by a few small fibres. The stem is a foot or so in height. Near its base are several small sheathing leaves, silvery on their under surface and green or brown above. The flowers are large and few in number, about four or five being the ordinary number. From their size and the considerable distance apart at which they are placed they render the flower-spike very noticeable, the upper four to six inches being flower-bearing. The sheathing floral leaves from which the blossoms spring are very large and conspicuous. The lip of the flower is broad and convex, and though lobed at the base appears almost as a simple form from the turning under and back of the parts. In texture it is very smooth and velvet-like, and richly variegated in colour with markings of yellow and brown. The flowers are without the spur that is so characteristic a feature in the butterfly orchis (figured in the third series) and several of the other species. The outer sepals are large and prominent, sometimes pale pink in colour throughout, at other times greenish or white ; the inner sepals are similar in tint but very much smaller.

The generic name *Ophrys* is simply the Greek word for eyebrow, while *apifera* signifies bee-bearing. It is not at first sight very evident why our beautiful plant should be branded by botanists as the bee-bearing eyebrow; but we find on turning to Pliny, a great authority on natural history, that the plant was in his time employed by ladies to darken their eyebrows. He tells us that "Lysimachia gives a fair and golden tint to the hair, and hypericon, likewise ophrys, makes it black." From the description which he gives of the plant it is more probable that he had in his mind an allied species, the tway-blade, a very common plant of our woods and moist pastures. The second name was bestowed on the plant by Hudson, a botanist of some repute. The plant was in the catalogue of Linnæus given as the *O. insectifera* or insect-bearing, but as we have other insect forms, as, for example, the butterfly orchis, the more definite and individualised name is clearly an advantage.

HEMP-NETTLE.

HEMP-NETTLE.

Galeopsis Tetrahit. Nat. Ord., Labiatæ.

THE hemp-nettle is so called not on account of any botanical affinity with the hemp—for the name was bestowed long before botanical science was out of its infancy—nor even from its sharing the valuable qualities of the hemp as a raw material for fabrics, though doubtless the fibres of many plants could be turned to more account than we find to be the case. The name merely arose from a slight resemblance in the leaves of the two plants. The leaves of the true hemp are composed of some five or seven long, narrow, sharply-serrated leaves, all springing from one point—a beautiful form in itself, and somewhat resembling the leaf of the better known horse-chestnut, except that in the hemp all the leaflets are much narrower in proportion to their length. The leaves of the hemp-nettle have no such

compound and radiate character, but each complete leaf was, in its form, the deepness of its serrations, and the prominent character of its veining, supposed to resemble the leaflets that composed the leaf of the hemp. The resemblance is somewhat remote, but was quite near enough to satisfy our forefathers, who seem never to have been so happy as when detecting these accidental natural likenesses of one plant to another.

The hemp-agrimony is another example of this system of nomenclature, a general likeness of its foliage to that of the hemp being the motive power in the choice of this name also. We may in fairness add that the resemblance in this latter case is more pronounced than in the plant that is the subject of our notice. Hemp-seed is readily obtainable, as all who keep canaries must be aware, and if any of our readers who are not already familiar with the plant will only sow some of the seed, they will, we think, be glad that we have introduced them to so graceful a plant. One may occasionally, and especially on the Continent, meet with it as a field-crop, and it is often grown in small quantities by cottagers and then disposed of to dealers.

The hemp-nettle is a somewhat rank and coarse-looking plant, attaining to a height of some eighteen inches or two feet, and is frequently met with throughout Britain on waste ground. It may be found in flower during the summer and autumn months. The plant has a somewhat stiff-looking and erect growth, and throws out a few spreading branches. Both stems and leaves are more or less covered with stiff hairs. The leaves are stalked, deeply veined, and sharply toothed, and, as in the case of all the *Labiatæ*, always in pairs. Another constant characteristic

in all the plants of this very large natural order is the quadrangular form of the stem. In some plants the angles are somewhat more rounded off than in others, but the feature is always clearly visible, and is in the present plant so marked, that it was formerly called the *Tetrahit*, a name derived from the Greek-word *tetra*, four. This allusion to the marked tetragonal character of the stem is still preserved by making this old name the present second or specific title. The meaning of the title, *Galeopsis*, we shall shortly give in our remarks on the yellow dead-nettle. The numerous flowers are found clustering near the summits of the stems, springing from the axils of the upper leaves, and of the well-known labiate type, of which we have already given several illustrations. The calyx teeth are very long and bristle-like.

The flowers of the hemp-nettle are ordinarily in colour as we have represented them; but we at times find what is termed the variegated hemp-nettle, a very marked variety, or possibly a distinct species. The botanists who claim for it a distinct specific value call it the *G. versicolor*, but as various intermediate forms between the two extreme types may be met with, it is probably more correct to consider it but a variety, and in that case it would be termed the *G. tetrahit*, var. *versicolor*. In this variety the plant is ordinarily more robust in growth, and the flowers are chiefly yellow, but have a large purple blotch on the lower lip. It seems to be more especially met with in Scotland, and is there in many places abundant. Like many other crimson and purple flowers, the hemp-nettle occasionally varies with white blossoms, but this is merely accidental. To quote Parkinson, in his "Theatrum Botanicum," "there is another hereof whose flower is of a perfect white colour

for the most part, or a little pale whayish, which doth plainly express the difference." The old authors often call our species the bastard-hemp.

Critical zoologists have been known to object to the popular name for the common cockroach or black-beetle, on the ground that the creature is not black, and that it is not a beetle; and we may in the same way be allowed to point out that our present plant is neither hemp nor nettle. The true nettles belong to a wholly different order.

The plant "dronken in wine comforteth the hart and drieueth away all melancholie and sadnesse." But, as the charge against us as a nation by our foreign critics centuries ago was that we were the victims of phlegm we can only conclude either that our critics were mistaken, or that our forefathers had not the courage of their opinions, and were wanting in the needful faith in this and several other plants that were equally commended as antidotes to the "melancholie."

WATER-CRESS.

WATER-CRESS.

Nasturtium officinale. Nat. Ord., Cruciferæ.

IT will doubtless be conceded that whatever degree, more or less, of acquaintance which some of our readers may have had with certain of our plants, we have at length, as in the case of the daisy and the dandelion, all reached a common meeting-ground, a plant that is familiar to every one. All our readers, urban as well as rural, will have made acquaintance with the water-cress, though only the latter will have seen it, as we have figured it, in the flowering state. The plant is not so desirable as an esculent during the flowering-season, and it is naturally the aim of the water-cress grower to cultivate large masses of foliage rather than to allow free flowering. Hence the townsman has no opportunity, so long as he keeps within sight of the paving-stones, of seeing the plant as we have figured it.

The root of the plant is long and creeping, composed of numerous tufts of slender white fibres. It is very

easily eradicated. In the river at the bottom of our own garden we have in some years had large quantities of the plant in vigorous growth, some of the masses being many square yards in area; and when this and the water buttercups, and other aquatic plants, blocked the river up too completely, we always found that while many of the things could only be kept down by a free use of the scythe, the water-cress, with a comparatively slight pull, could be entirely dislodged, and sent floating down stream. The floating portions presently lodge on a shallow part of the bed of the river, or get drifted into a quiet back-water, and there speedily re-root themselves. When the plant is in flower its multitudinous blossoms give quite a white mantling to the stream, and at a little distance, as one looks up or down stream, look almost as though not flowers, but flour had been freely sprinkled! The stems are from a few inches to some four feet long, and have numerous rootlets springing from their lower portions. The leaves vary in form according to their position on the stem; those of the flowering-shoots are shown in our sketch, but those with which we are more familiar as an article of diet are much larger, often bronzed or purpled, and having the terminal leaflet much larger than the others. The corolla is of the cruciform type, so characteristic of the great natural order to which the plant belongs. The pod is an inch or so in length.

The fool's-cress, water-parsnip, or *Sium nodiflorum*, is often found growing with the water-cress, and as the latter is thoroughly wholesome, while the former is deleterious, some little care should be exercised, though there is no real difficulty in discriminating them. The fool's-cress belongs to the umbel-bearing plants; all its flowers, therefore, are

borne on stems that spring in bunches from one point, like the ribs of an umbrella, while its leaves are much longer, more acutely pointed, and of a paler green than those of the water-cress; the leaf-stalks also at their bases sheathe the stem, and those of the water-cress do not. The fool's cress is so called because no one but a very foolish person would really mistake it for the true water-cress. The resemblance between the two species is after all very slight, and the points of difference we have set down are amply sufficient to prevent any possibility of mistake.

The water-cress grows most luxuriantly in clear and gently-moving streams having a gravelly bottom, and the plants have then a far finer development and a richer flavour than those that have sprung up either on mud or in almost or quite stationary water; but we have even heard of its being grown very successfully as a pot-plant in the greenhouse, the great necessity being an ample supply of water, or the plants grow tough and burning to the taste. Water-cress must be familiar to all as an agreeable and wholesome salad, and its culture for the table is very extensively practised in many parts of England. Large quantities are brought in daily for a considerable part of the year to the London markets and other large centres of population, travelling in many cases forty or fifty miles to their destination. One Nicholas Mesner has the credit of being the first man to cultivate it. He was a native of Erfurt, and lived there in the middle of the sixteenth century; but though after this beginning the water-cress was freely grown in Holland and Germany, it was more than a hundred years afterwards that an Englishman, named Bradbury, introduced its culture into England.

A water-cress bed should be about four or five feet wide, and have a good sandy or gravelly bottom: in this the young plants or cuttings are planted in rows about a foot apart, so as to allow free passage of water. The depth of water need not be more than three or four inches. The water-cress bears a great deal of gathering without injury to the plants.

The plant is in France the *Cresson*, and in Germany the *Brunnenkresse*. The generic name is derived from the words *nasus tortus*, a convulsed nose, on account of the pungency of most of the species. The water-cress contains a considerable amount of sulphur and iodine, and though we now value it more especially as a pleasant relish, it is doubtlessly valuable medicinally from its stimulative effects on the digestive organs and its anti-scorbutic virtues to persons of debilitated constitutions. A decoction of it formed at one time a leading ingredient in the "spring tea" our forefathers, or perhaps more especially our fore-mothers, seem to have had such faith in.

CHERRY.

CHERRY.

Prunus Cerasus. Nat. Ord., Rosaceæ.

WE have already depicted one species of *Prunus*, the blackthorn, or sloe; the only other representatives of the genus amongst us are the present plant and the bird-cherry, or *P. Padus*. The cherry is found in an apparently wild state in spots far remote from cultivation, as, for example, on the mountains of Scotland, as well as in our English lanes and fields. While some writers dispute whether it be truly indigenous with us, or merely the degenerate descendant of some long-since-introduced variety, we can at all events point to the fact that it is widely disseminated almost everywhere. We owe the introduction of the garden cherry into these islands to the Romans, and while it is possible our hedge cherry may be but a degeneration from this, it is at least as possible that while we have indigenous wild

apples and plums, we may have equally indigenous wild cherries.

Pliny, in an interesting passage, writes as follows:—"The cherry did not exist in Italy until the victory of L. Lucullus over Mithridates, in the year of the city 680. He was the first to introduce this tree from Pontus, and now, in the course of one hundred and twenty years, it has travelled beyond the ocean, and arrived even in Britannia." The tree, we are told, was brought from a place called Cerasus, in Pontus, but it is doubtful whether the Romans called the fruit the cerasus from the name of the place, or whether they so called the place from the abundance of the cerasus there, in the same way that saffron is not so called because it was cultivated at Saffron Walden, but Saffron Walden was so called because so much saffron was cultivated in its neighbourhood. Be this as it may, the Romans called the cherry the cerasus, and their name is yet preserved amongst the nations they subdued, as we may see in the French cerise, the Spanish cereza, the Portuguese cereja, the Italian ciriegia, and the English cherry. In Chaucer and other old English writers the word is given as cherise.

For some long period after the Roman occupation we find no reference to the plant or fruit, and it has been supposed by some writers that the cultivation of the tree was lost during the stormy period that followed; we hear nothing of it during Saxon, Danish, or Norman occupation, but from a passage in a poem by Lydgate (who was born about 1370), we find that the hawkers of London were then exposing cherries for sale amongst their other wares.

The wild cherry may be found in flower in the

woods and hedgerows in May, at which time it is too conspicuous to be overlooked. Its flowers are large, pure white, and very numerous, so that the whole shrub or tree is a mass of white, and may be seen a mile away. The leaves are large, deeply veined and serrated, and but few in number during the flowering-season. The blossoms are borne on stems about an inch and a half or two inches long, in groups of some three or four; these spring in a clustered arrangement from the little groups of leafy scales that are given out at intervals from the stems. The petals and sepals are each five in number, and on the expansion of the blossom the calyx is thrown boldly back on the stem, in much the same way that we see it in the bulbous crowfoot, a plant we have elsewhere figured. The stamens form a conspicuous yellow mass in the centre of the flower. The fruit is globular and smooth, and though edible by birds and boys, has a bitter taste that makes it very inferior to the cultivated kinds. The gum which exudes from the wild cherry is equal to gum arabic, and the wood is hard and tough, taking a good polish and having a grain that makes it sought after by the turner and cabinet-maker. Besides the ordinary employment of cherries in cookery and as a dessert fruit, they are largely used on the Continent for distillation. Kirschenwasser is a spirit obtained from the fruit and kernels, and noyau, ratafia, and maraschino all owe more or less of their potency and flavour to the same fruit.

The Romans are known to have cultivated eight kinds of cherries, while Tusser, in his delightfully quaint "Five Hundred Pointes of Good Husbandrie," first published in 1573, mentions only "cherries black and red," together with "damisens, respis, filbeards, boollesse," and several other

fruits. Parkinson refers to thirty-four sorts, and in these later days this number has been considerably exceeded. Loudon we see, in his "Encyclopædia of Gardening," gives a list of thirty-six sorts, but expressly indicates that he could have made the list longer, and that he only cared to set down the best kinds. The cherry delights especially in a dry and light soil, but in Kent, the paradise of cherry-growers, many of the best orchards are on a deep loam. Birds, and especially blackbirds, are particularly fond of cherries, and as they rise at very early hours, long before any one else is about, they manage to do a great deal of mischief. Scarecrows in the trees soon lose their terrors, and where the trees are large it is much easier to suggest netting them over than to accomplish this satisfactorily. We have often had occasion to wish that the "Small Birds Protection Act" could be somehow supplemented by a little cross legislation, bearing some such title as the "Cherry and Currant Protection Act," as it is, to say the least of it, aggravating, to watch one's fruit slowly ripening, and then much more rapidly vanishing.

SALAD BURNET.

SALAD BURNET.

Poterium sanguisorba. *Nat. Ord.*, *Rosaceæ.*

PLANTS, there is no doubt, in not a few cases may be very common and yet scarcely come within the literal scope of our title and be called familiar; and the present species, the salad burnet, may be taken as a very good illustration of that fact, for it is abundantly distributed throughout the country, and yet we venture to say that to ninety-nine pairs of eyes out of a hundred that light here upon its counterfeit presentment, it will be a stranger. The reason of this is not far to seek; the small size of its flower-heads and their absence of strong colour are sufficient to render the plant invisible amongst the grass to those who only cast a casual glance at the herbage at their feet, while it does not occur in such masses, nor on spots so bare of other vegetation as the equally inconspicuous moschatell, and other such-like plants do, thus more or less compelling us to give it our observation.

The influence of geological formation is often much greater than many persons who have not studied the matter at all would suppose, for we find numerous species attaching themselves, either exclusively or by evident choice, to certain soils; the chalk hills of our downs, for example, whether met with round Dover, or Guildford, or wherever else they may be, afford a good illustration of this. The salad burnet is a lover of chalk and limestone, and is abundant wherever we get a dry hill-side or high-lying pasturage of this character in the south. It is much more rarely met with in either Scotland or Ireland, than in England.

The salad burnet is a perennial, and should be looked for during June, July, and August. Inconspicuous as it is, it is not without a certain quaint charm of its own; the foliage is richly cut, and the flower-heads are very curious. Several nearly upright stems, from nine inches to a foot or so in height, are thrown up from the root; these are somewhat angular, often reddish in colour and smooth to the touch. The leaves spring in alternate arrangement from these stems; each leaf is composed of numerous lateral leaflets, small, and deeply cut into acute teeth. The necessities of our space have compelled us to be content with showing a leaf having seven pairs of these leaflets, but leaves with twice that number are quite as commonly met with. The flowers grow in globular heads, the lower flowers in each head being males, and the upper ones females. Hence, at the lower part of each head we see conspicuously the hanging tufts of stamens, while the whole is surmounted by the less noticeable, but delicate and richly coloured stigmas. The staminiferous flowers are large and spreading, green in colour, and often edged with crimson;

the pistil-bearing flowers are smaller—the first, or stamen-bearing, are cut into four very evident lobes; the second four-cleft, but much more finely.

Attempts have been made to introduce both this and our allied species the great burnet, or *Sanguisorba officinalis*, into agriculture, but the results would appear to have by no means answered the expectations of those who promoted the idea. The leaves of the salad burnet, when bruised, smell somewhat like cucumber, and have an acid flavour that at one time led to its introduction into salads, a fact still preserved in its common name; while others added it to wine, on account of an agreeable taste it was held to contribute to the mixture. This preparation is commemorated in the generic name *poterium*, a word signifying drinking-cup. Pliny highly commended a decoction of the plant beaten up with honey, for divers complaints. This old use of the plant as a flavouring and a medicine is incidentally seen in the following extract from the "Theatrum Botanicum." "It groweth wilde in divers places of this Land, in dry sandy places, but is usually preserved in gardens, to be ready at hande when it shall neede to be used." According to this author, the plant possesses many "vertues." "It is a speciall helpe to defend the heart from noysome vapours, and from the infection of the Plague or Pestilence, and all other contagious diseases, for which purpose it is of great effect, the juice thereof being taken in some drink. It is also a singular good Woundherbe for all sorts of wounds, both of the head and body, either inward or outward, to bee used eyther by the juice or decoction of the herbe, or by the powder of the herbe or roote, or the water of the distilled herbe, or else made into oyle or oyntment by it selfe, or with other

things to be kept." We see, too, that in the "New Herball or Historie of Plants" of "that learned D. Rembert Dodoens," a quaint old black-letter volume published in 1586, the burnet is strongly commended as a healer of wounds, "made into powder and dronke with wine, wherein iron hath bene often quenched, and so doth the herbe alone, being but only holden in a man's hand as some have written. The leaues stiped in wine, and dronken, doth comfort and rejoice the hart, and are good against the trembling and shaking of the same." These are but samples, mere surface skimmings, of some of the more evident "vertues" of this lowly herb: space forbids our adding more, nor, indeed is it necessary, for if our readers will only consider that it is a sort of general-heal-all, a more detailed catalogue becomes needless.

MARSH-THISTLE.

MARSH THISTLE.

Cnicus pulustris. Nat. Ord., Compositæ.

IN our series we have already figured the lordly spear-plume thistle, the corn sow-thistle, and the dwarf thistle; and ere we come to the end of our series we hope to give more, in addition to the present plant. All are common plants, and as such claim a place, as of right, in our series. Culpeper, we see, begins and ends his description of the British thistles as follows:—"Of these there are many kind growing here in England, which are so well known that they need no description." There are certain manifest advantages to the author in this way of treating the subject, but to any one in search of information the treatment appears a little bold. Of the ash-tree, for example, he writes:—"This is so well known that time will be mis-spent in writing a description

of it." Of the barberry again he writes;—"The shrub is so well known by every boy and girl that has but attained to the age of seven years, that it needs no description;" while of the cherry he says, "I suppose there are few but know this tree for its fruit's sake, and therefore I shall spare writing a description thereof." In like flippant manner he discourses of the white lily, and several other plants.

Like all other plants, the Marsh-thistle was placed by mediæval botanists under the planetary influences: "Mars rules it, it is such a prickly business." Many of the older writers approached the study of plants less from a botanical than a medico-astrological point of view, and ascribed Jovial, Mercurial, or Saturnine influences to the wayside weeds. In one of these old books the writer divides his readers into two classes: the vulgar, and those who study astrology, and thus addresses them:—"To the vulgar: kind souls, I am sorry it hath been your hard mishap to have been so long trained in such Egyptian darkness, even darkness that may be felt. The vulgar road of physic is not my practice, and I am, therefore, the more unfit to give you advice. If I should set you to look at the sun, I should dazzle your eyes and make you blind. To such as study astrology, who are the only men I know that are fit to study physic, physic without astrology being like a lamp without oil, you are the men I exceedingly respect, and such documents as my brains can give you at present I shall give you. Fortify the body with herbs of the nature of the Lord of the Ascendant, 'tis no matter whether he be a Fortune or Infortune in this case. Let your medicine be something anti-pathetical to the Lord of the Sixth. If the

Lord of the Tenth be strong, make use of his medicines: but if this cannot well be, make use of the remedies of the Light of Time. Be sure always to fortify the grieved part of the body by sympathetical remedies. Regard the heart, keep that upon the wheels, because the sun is the foundation of life, and therefore, those universal remedies, *aurum potabile* and the philosopher's stone, cure all diseases." All which points we trust our readers will duly bear in mind when they doctor themselves with this or any of the other plants of our series, or we must most distinctly decline to be responsible for any consequences that may ensue. But *revenons à nos chardons.*

The marsh-thistle, as its name implies, prefers moist situations, and may be looked for—or rather, found, as its abundance precludes the necessity of search—not only on marshy grounds, but on moist heaths and commons, damp meadows, and the boggy places in woods. It is ordinarily some five feet high, but in this last locality its growth amongst the sheltering and shade-casting trees is often considerably beyond this, while its long, slender, and scarcely-branched stem and erect growth make it look even taller than it is. As it is pre-eminently the thistle of the marsh, and is never found except in such localities as we have referred to, it is not likely to be mistaken for any other thistle. Like all the rest of its relatives, it often varies to white flower-heads, and while the stem and leaves are exceptionally spiny, it differs from most of the other species in having its flower-heads defenceless. Both these characters, the excess of spiny defence in one part and the absence of it in another, may be clearly seen in our figure. The leaves are long,

narrow, and stalkless, their bases being produced down the stem, their upper surfaces of a deep green, and the whole leaf more or less covered with rough hairs. The lateral segments of the upper leaves are long and narrow, while the terminal portion of the leaf is carried out into a still longer and more acute point, giving a very quaint and marked character to the form. The flower-heads are numerous, and densely massed in clusters at the end of the stem; the flowers themselves are of the well-known composite type, and are succeeded by a mass of feathery down. As the plant is a biennial, there should be no great difficulty in its extirpation by the husbandman, but it is very necessary that it should be eradicated or cut down before seeding-time, otherwise each passing breeze will waft its winged seeds far and wide over the country-side. The neglect of one farmer falls on all in such a matter. In many cases it would probably be possible to meet the plague most effectually by effective drainage operations.

TEASEL.

THE TEASEL.

Dipsacus sylvestris. Nat. Ord., Dipsacaceæ.

THE teasel, though not so common as some other plants, is very generally distributed, and we should imagine that few persons out for a day's ramble in the country would fail to come across a specimen or two of it. Its harsh, tough, wiry stems offer no temptation to any animal to browse on them, and long after most plants have died away with the summer or autumn, the dry gaunt stalks of the teasel and its brown and withered heads stand erect in the hedgerow and attract our notice. Some of our botanists admit three species, the *D. Fullonum*, or fuller's teasel, the present species, and the *D. pilosus*, a small teasel, while most of them are inclined to blend the first and second into one. The first form has the hooked scales of the flower-head largely developed, and cultivation is found to preserve this feature, while neglect or

a poor soil causes it to disappear and pass into the second form, and there is little reason to doubt that the fuller's teasel should be considered merely as a variety of our present plant. The small teasel is a distinct species; it may at times be found in moist hedgerows, but is not generally distributed; its height, the shape of its flower-heads, the form of the foliage, are all quite distinct from the present plant.

The common teasel should be searched for on waste land, in the hedgerows, and by the roadside. It flowers rather late in the summer, and while commonly distributed in the south of England, becomes rarer as we go northward. The plant is a biennial, and attains to a height of some four or five feet, though we may sometimes find specimens only eighteen inches or so in height, bearing the crop of cylindrical flower-heads. The whole plant is very harsh and prickly to the touch. The lower leaves are large, and lance-headed in shape, and coarsely toothed; the upper leaves are more pointed in character, grow in pairs, and have their bases so grown together as to form a deep cup, capable of holding dew and rain. This conspicuous feature has earned the plant its older and alternative name of Venus's basin, and it was held that the water which collects in this natural receptacle—and may almost always be found there—was a remedy for warts. Its generic name, *Dipsacus*, also refers to this peculiarity of structure, being derived from the Greek verb signifying to be thirsty.

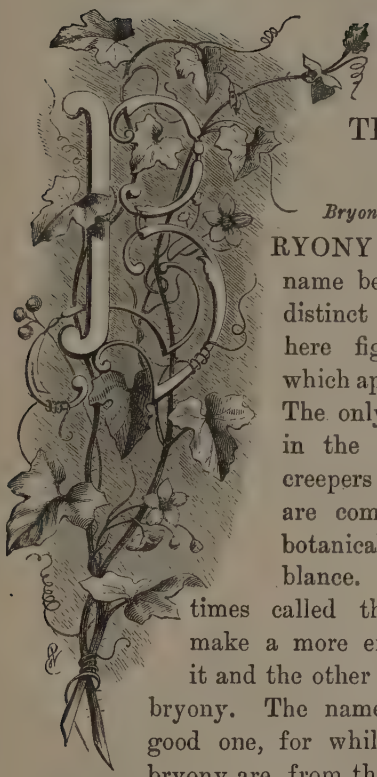
Lyte, in his translation of Dodœns (1586), calls our plant the card thistle. "The card thistle his first leaues be long and large, hackt round about with notches like the teeth of a sawe, betwixt these leaues riseth a holow stalke of three foote long or more, with many branches, set here and

there with diuers hooked sharp prickles, and spaced or seuered by ioints, and at euery of the sayd ioints grow two great long leaues, the which at the lower endes be so closely ioined and fastened together round about the stalke, that it holdeth the water, falling either by raine or dewe, so sure as a dish or bason. At the top of the branches grow long, rough, and prickle heads set full of hookes; out of the same knops or heads grow small purple flowers placed in cels and cabbins, like the honie-combe, in which chambers or cels (after the falling away of the flower) is found a seed-like fenil. The knops or heads are holow within, and for the most part hauing worms in them, the which you shall find in cleaning the heads. The small wormes that are founde within the knops of teasels do cure and heale the quartaine ague, to be worne or tied about the necke or arme."

Gerarde, in his "Historie of Plants," tells us his own experience in this latter matter. It would appear from this that the theoretical remedy would not bear the rough strain of actual use. He shall, however, speak for himself in his own refreshingly quaint way :—"It is needlesse here to alledge those things that are added touching the little wormes, or magots, found in the heads of the Teasell, which are to be hanged about the necke, for they are nothing else but most vaine and trifling toies, as my selfe haue proued a little before the impression hereof, hauing a most grieuous ague, and of long continuance: notwithstanding physicke charmes, these wormes hanged about my neck, spiders put into a walnut-shell, and divers such foolish toies that I was constrained to take by phantasticke people's procurement; notwithstanding, I say, my helpe came from God himselfe, for these medicines, and all other such things, did me no good at all."

The flower-heads are numerous, growing singly on the extremities of the footstalks, and first breaking forth into flower in a ring of blossoms near the centre. Cloth-makers have found that no invention can supersede the natural teasel-head for raising a nap on woollen cloth. These heads are therefore an extensive article of commerce, the plant being largely cultivated for this purpose in the west of England, in France, Germany, Italy, and elsewhere. Many thousands are imported every year, and any one who is familiar with any of the centres of the clothing industry, will remember seeing the waggon-loads of teasel-heads going through the streets to the different factories. The heads are cut as soon as the flowers wither, about eight inches of stem remaining attached to them, and they are then dried, and sorted into qualities. The great utility of the teasel-head is that it gives the necessary nap, but breaks at any serious obstruction, while all metallic substances in such a case expect the cloth to yield first, and therefore tear the material.

RED-BERRIED BRYONY.



THE RED-BERRIED BRYONY.

Bryonia dioica. Nat. Ord., Cucurbitaceæ.

BRYONY in popular parlance is a name bestowed equally on two very distinct species—the plant we have here figured, and a second plant which appears on another of our plates. The only point in common is found in the fact that both are hedge-creepers; in every other respect they are completely unlike; there is no botanical affinity, no outward semblance. The present plant is sometimes called the white bryony, so as to make a more emphatic distinction between it and the other plant referred to—the black bryony. The name is not, however, at all a good one, for while the berries of the black bryony are, from their deep purple-black, a sufficient justification of its name, there is no especial propriety in the name white bryony as applied to the present species. Its ordinary name, that with which we head our remarks, is in every way the most expressive. It is also called wild vine, wood-vine, or hedge-vine by old writers, and these names, all pointing to its resemblance to the

true vine of our gardens and hot-houses, are not by any means bad ones, as its large leaves, insignificant flowers, tendrils, and clusters of red berries, are all features in which it more or less resembles the grape-vine.

The root of the red-berried bryony is tuberous in form, white, and very large, often branched or forked. The root-stock is perennial. The branches thrown off die down annually; they grow with great rapidity and stretch to a long distance, enfolding the hedge over which they climb in a mass of beautiful foliage. These stems branch a good deal, are very rough in texture, and angular in section; they are, however, very weak, and need almost continuous support. On breaking them they are found to be full of an acrid and very ill-smelling juice. The tendrils with which the plant is liberally provided as a means of attachment to sturdier neighbours are either simple or branched, of a considerable length, and ordinarily wound up tightly in a spiral form, fold after fold wrapping round any convenient object within reach, and giving so firm a hold that nothing but downright violence will suffice to part them from their point of attachment. The flowers are diœcious, *i.e.*, the male and female blossoms are on different plants. In most plants, we need scarcely say, each flower is complete in itself. If we pick a poppy, for example, we find a central organ, or stigma, surrounded by its ring of stamens, and any one flower selected from such plant will show all the floral parts or organs. In the bryony all the flowers upon a certain given plant will either be pistil-bearing solely, or they will all be exclusively stamen-bearing. Both kinds of blossom are of a pale and rather sickly shade of green, veined over rather prominently with lines of dark green in a kind of rough reticulation. The male, or staminiferous,

flowers grow several together in a racemose inflorescence; the female, or pistilliferous, flowers ordinarily grow in twos or threes. These latter are much smaller, and of a somewhat different form from the others. In each case the calyx and corolla are both divided into five parts. The foliage is a rich green, rather coarse in appearance, and very rough to the touch. The forms of the leaves are, however, very graceful, and rendered the plant one of the favourite subjects of the carver in mediæval times. It will be found introduced in many works of the Gothic period. The leaves are divided into five or seven large lobes, the central one being always considerably the largest, and there is a certain quaint angularity of form that is very pleasing. The berries, which will only be found on the plants having pistillate flowers, are first green, then yellow, next orange, and end by being a beautifully bright red. Berries of all these tints may be found at the same time in close companionship, and as the plant dies away as the berries ripen, long festoons of these brilliantly-coloured fruits may be met with hanging on what appears to be a thin brown line. The effect is very curious, and would be in no slight degree puzzling to any one who did not know more of the plant than such an opportunity of observing it would afford him. The red-berried bryony is very commonly distributed throughout England, though it would appear to be seldom or never met with in either Scotland or Ireland. It flowers from May to September.

The botanical name of the plant is the *Bryonia dioica*. The first of these names is derived from a Greek word signifying to shoot out, and is bestowed on the plant in allusion to the rapidity of its growth. The second, or specific,

name points to the dicœcious character of its blossoms. The red-berried bryony is not only the sole species indigenous to England of the genus, but this genus is the only one having a British representative in the order *Cucurbitaceæ*, an order that is chiefly tropical in its range. Most of the plants of the order are African in their habitat, but it includes such well-known cultivated species as the various forms of cucumber, gourd, melon, and pumpkin. Almost all the species abound in a bitter and laxative principle.

The berries of the bryony are poisonous, and although the plant has been at one time a good deal used in rustic medicinal practice, it is a dangerous thing to meddle with. Its violent and powerful action has caused it in France to receive the name of *Navet du diable*, a sufficiently expressive indication of the peril of having any dealings with it.

WOOD LOOSESTRIFE.

WOOD LOOSESTRIFE.

Lysimachia nemorum. Nat. Ord., Primulaceæ.

WE have in Britain four species of yellow loosestrife, and we propose having the pleasure of introducing our readers to three of them, including the present illustration. All these belong to the same genus, *Lysimachia,* and in addition to these there is another plant of a quite different genus, the purple loosestrife or *Lythrum Salicaria,* of which also we shall present an illustration. Of the yellow loosestrifes, the plants yet to be figured will prove the *L. vulgaris,* or great yellow loosestrife, so conspicuous an adornment of our river-sides, as it throws up its stem some three feet high, and bears on its summit its clustering golden flowers; and the *L. nummularia,* the creeping loosestrife, money-wort, herb-twopence, or creeping-Jenny (for it is a general favourite, and has many popular names), which sends its long lines of conspicuous

yellow blossoms and glossy verdant leaves creeping amidst the herbage of the hedgerow. The only species we shall not figure is the *L. thyrsifolia* or tufted loosestrife. In this the stems are some two feet high, the leaves are numerous and lanceolate, and the small yellow flowers spring in dense bunches from the axils of the leaves. It is found in wet marshy ground, or by the sides of streams, but is very rarely met with in England, and chiefly in the northern counties when found at all, though it occurs somewhat more frequently in Scotland.

The wood loosestrife, the subject of our present illustration, is one of the smaller species, its slender stems being rarely a foot in length. It should be looked for in woods and shady copses, from the end of May to the beginning of September, and it seems to thrive more especially where there is a considerable amount of moisture in the soil. All lovers of woodland scenery will be aware that beneath trees the ground is often decidedly soft, and when we come to a place where we more especially hesitate whether to go on or to turn back, we may expect to find the wood loosestrife not far off.

The meaning of the generic title *Lysimachia* we shall probably refer to in our comments on a succeeding species in the genus; the specific name is Latin in its origin, and means that which pertains to woods or groves. We recognise it again in the botanical name of the wood anemone—*Anemone nemorosa*—and some few others. A good many other plants have the terms *sylvestris* or *sylvatica* applied to them, but these would appear to be distinctions without any real difference, as the sylvan shades are equally those of the woodland or the grove. The hound's-tongue, *Cynoglossum sylvaticum*, and the wood

scorpion-grass, *Myosotis sylvatica,* are neither more nor less plants of the forest than the wood loosestrife itself.

The root of the present loosestrife is perennial, and composed of numerous long whitish fibres. From this spring several slender spreading stalks, weak and prostrate in character, often rooting near their bases, and generally bright red in colour; the leaves grow in pairs, on short foot-stalks, and are of a broadly oval form, but pointed at their extremities. They are glossy on both the upper and under surfaces, somewhat prominently veined, and have their margins waved. In our illustration it will be seen that in one case the leaf stands alone, and so far seems to dispute our assertion that the leaves always grow in pairs, but it will also be seen that the foot-stalk of the second leaf is visible, and that it is only some accidental circumstance that has deprived the plant of that particular leaf. The botanist desires to see the absolute facts of plant structure, and runs some little risk of making his drawings too suggestive of diagrams, while the artist often too little regards these facts, and draws the object as he thinks he sees it, trusting to the artistic eye and accuracy of perception to supply all that is needed. Our aim has been in all our drawings to try and combine these two things—the absolute facts of the case and those picturesque accidentals that tell somewhat of the history and vicissitudes of the particular plants.

The flowers of the wood loosestrife have a deeply five-cleft corolla, broadly displayed and a brilliant yellow in colour. Each flower is supported on a long and slender stalk, rising from the axils of the leaves. The five long and narrow segments of the calyx may be seen in the flower that turns its back on us. The globular capsule

that succeeds the blossom has a way of twisting round on its stalk in the same manner as the pimpernel does, and on this account and from general similarity to that flower the old authors often called the wood loosestrife the yellow pimpernel. A drawing of the pimpernel will be found at page 153 in our third volume, so that a comparison of the two plants may be readily made.

WATER AVENS.

WATER AVENS.

Geum rivale. Nat. Ord., Rosaceæ.

IN a subsequent volume we shall figure another species of avens, the common avens, or Herb Bennet, the *Geum urbanum* of botanical nomenclature; a plant abundantly to be met with almost everywhere in the hedgerows and on banks. A reference to its illustration will show that though in foliage the common avens is very similar to the water avens, its flowers are entirely different, those of the one forming a small but widely-spreading golden star of five petals, while the flowers of the other, as our illustration shows, are much larger, of bell-like form and of reddish tint. We have thus dwelt upon the marked differences in the flowers of the two varieties—differences that will be still more readily perceived by an inspection and comparison of our illustrations, because it is a curious fact that when the two species are found in the same neigh-

bourhood, we frequently find hybrid forms partaking of the characters of both, and inclining sometimes towards one and sometimes towards the other. What may be called the typical intermediate form was at one time raised to the dignity of an independent species, under the title of *Geum intermedium*, a name that sufficiently explains itself; but as every degree of hybridism and transition from the two extremes may be met with, there is evidently no justification in admitting the claim of any particular degree of change to an independent existence. We have ourselves met with every stage of gradation between the two extreme types.

The water avens, as its name implies sufficiently clearly, is a lover of moist situations, so that we find it ordinarily by the banks of rivers and canals in the coarse herbage that fringes their margins, or in ditches. It is not, however, so exclusively a plant of the low-lying valleys as its name would perhaps, lead us to suppose; the specimen, for example, from which our illustration was taken was growing in a wood on the summit of a considerable eminence, but we need scarcely remind any one who has had any experience of mountains, whether in Cumberland, Wales, or Switzerland, that marshy and swampy ground is by no means uncommon on them, and it is in such situations that we find the water avens. It is altogether a northern plant, flourishing most freely in the northern parts of Europe, in Canada, and Siberia, and though occasionally found in southern England, it is very much more common in the northern counties and in Scotland.

The generic name geum is derived from the Greek, and signifies yielding an agreeable flavour: this refers, however, to the root of the other species in the genus, the *G. urbanum*; while the specific name is based on

the Latin word *rivulus*, a small brook. On turning to Prior, to see what he could tell us of the significance of the popular name, we were met by the following very unsatisfying statement:—"Avens, in Promptorium Parvulorum *avence*, in Topsell and Askam *avance*, Mediæval Latin *avantia* or *avenci*, in Ortus Sanitatis *anancia*: a word of obscure origin and quite unintelligible: spelt also anartia, anantia, arancia, and amancia." Several of these authorities for the spelling are decidedly antique; for example, the last book referred to was brought out in the year 1486, so that we must conclude that all clue to the original meaning of the word is lost in the mists of far-reaching antiquity.

The root-stock of the water avens is perennial, the stems are erect, about a foot high, scarcely branching, having only a few leaves upon them, and those of a very simple character. Most of the leaves spring from the base of the plant, and have one large terminal lobe and a few small lateral leaflets. The whole plant is hairy. The flowers are few in number, often drooping, the five petals forming together a compact and cup-like corolla. The petals are heart-shaped, and vary in colour from a dull orange to red or purplish. The calyx is cleft into ten segments, five being very much smaller than the others with which they alternate. It is dull reddish-purple in colour, and partakes of the same compact nature as the corolla. The stamens are of the usual rosaceous character, an indefinite number of them clustering together, and forming with their anthers a yellow mass in the centre of the flower—using the term centre, of course, in its artistic, not botanical, sense, for here, as elsewhere, the female organs occupy the actual centre, and the stamens surround them.

Though the common avens had a great reputation in ancient and mediæval times as a medicinal plant, we fail to find any special commendation of the water avens. It is either passed over unnoticed, or we are merely told that its properties are similar to those of the common avens. It was, however, often used in olden times to flavour ale and other beverages, its roots, like those of the commoner species, having a somewhat aromatic character, and a slight astringency. It was held to not merely improve the flavour of the home-brewed ale, but also to preserve it from turning sour.

Our modern herbalists collect the water avens, and we learn that in the United States especially it has a popular reputation, and is held in great esteem as a febrifuge and tonic, in such settlements as that of Eden so graphically described by Dickens.

Printed by CASSELL & COMPANY, LIMITED, La Belle Sauvage, London, E.C.